



West Bengal State Electricity Distribution Company Limited

(A Govt. of West Bengal Enterprise)
HOWRAH REGIONAL OFFICE

WBSEDCL

Howrah Regional Office, WBSEDCL:
13 Netaji Subas Road, 1st Floor, Howrah
711101

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Regd. Office of WBSEDCL: Vidyut Bhavan,
Block-DJ, Sector – II, Bidhannagar,
Kolkata – 700 091. Website- www.wbsedcl.in

Corporate Identity No. (CIN)-U40109WB2007SGC113473

NOTICE INVITING e-TENDER

NIT No. : RM/HRO/ELECT/e-T/20-21/03 Dt- 26.06.2020

The Regional Manager, Howrah Regional Office, WBSEDCL invites e-Tender only from the bonafide, experienced & resourceful contractors of Govt., Semi Govt., Govt. undertaking Organizations, Govt. Enterprises etc. who have successfully completed similar nature of work (erection schedule only) having

- contract value in a single contract during last seven years, not below Rs 80 % of total quoted value.
 - contract value in a 02 nos contract during last seven years, not below Rs 50 % of total quoted value.
 - contract value in a 03 nos contract during last seven years, not below Rs 40 % of total quoted value.
- (Submission of Bid through online).

Sl No.	Name of the work	Estimated Amount (Rs)	Earnest Money (Rs)	Cost of Tender Documents (Rs) (Non-Refundable)	Period of Completion	Name & address of the concerned office
01	Laying, Installation & Erection for drawal of 33 KV U.G. Cable double ckt. of R.L- 6.60 Km, by laying of 33 KV grade : single core: 1000 sq mm XLPE Al. Cable with one no. stand by single core cable for each feeder along with supply & laying of 24F Armoured Fibre Optics Cable and accessories for each ckt. directly from Howrah 220 KV Sub-Stn. to the premises of M/S KMRCL for an ultimate contact demand of 40 MVA.	7,50,14,822.00	15,00,296.00	10000.00	60 days	Howrah Regional Office, WBSEDCL, 13 Netaji Subas Road, 1st Floor, Howrah-711101.

- In the event of e-filling intending bidder may download the tender document from the website <https://wbtenders.gov.in> directly with the help of Digital Signature Certificate. Necessary cost of tender document (tender fees) and earnest money may be remitted through demand draft / pay order issued from any Scheduled Bank in favor of the "West Bengal State Electricity Distribution Company Limited" payable at Howrah and also to be documented through e-filling. The original Demand Draft / Pay order against tender fees, Earnest Money Deposit (EMD) should be submitted physically at Howrah Regional Office, WBSEDCL, 13 Netaji Subas Road, 1st Floor, Howrah-711101 under sealed cover.
- Both Technical Bid and Financial Bid should be submitted in technical and financial folder concurrently duly digitally signed by the Tenderer through the website <https://wbtenders.gov.in>.
- Technical Document and Financial Bid should be submitted online on or before as per the "Date & Time Schedule" stated in Sl. No.-09.

4. The FINANCIAL OFFER of the prospective tenderer will be considered only if the TECHNICAL DOCUMENT of the tenderer found qualified by the Tender Inviting Authority. The decision of the Tender Inviting Authority will be final and absolute in this respect. The list of Responsive and Non-Responsive Bidders will be displayed in the website.
5. Eligibility criteria for participation in the tender:
 - 5.1 Bona fide, experienced & resourceful contractors of Govt., Semi Govt., Govt. undertaking Organizations, Govt. Enterprises etc. who have successfully completed **similar nature of work having**
 - a) contract value in a single contract during last seven years, not below Rs 80 % of total quoted value.
 - b) contract value in a 02 nos contract during last seven years, not below Rs 50 % of total quoted value.
 - c) contract value in a 03 nos contract during last seven years, not below Rs 40 % of total quoted value.
 - 5.2. All intending Bidders are required to produce valid copies of current S.T / GST, Professional Tax (PT) receipt challan along with PAN Card / IT return as well as EPF , ESI , Service Tax Registration certificates & certificate of compliance of statutory obligations (to be documented through e-filing).
6. No mobilization / secured advance will be allowed.
7. **Constructional Labor Welfare Cess @ 1% (one percent) of cost of construction will be deducted from every Bill of the selected agency, GST, Royalty & all other statutory levy / Cess will have to be borne by the contractor & the rates quoted in the BOQ is inclusive of all such taxes and Cess as stated above.**
8. Bids shall remain valid for a period not less than 180 (One hundred Eighty) days after date of Bid opening of tender. Bid valid for a shorter period shall be rejected by the Tender Inviting Authority as non-responsive. If the tenderer withdraws the bid before the period of bid validity without giving any satisfactory explanation for such withdrawals, the earnest money as deposited will be forfeited forthwith without assigning any reason thereof.

9. **Date & Time schedule:-**

Sl. No.	Particulars	Date & Time
01.	Date of uploading of N.I.T and Tender Documents (online). [Publishing date]	02.07.2020 after 16.00 Hrs
02.	Documents sell / download start date (online).	02.07.2020 after 16.05 Hrs
03.	Bid Submission upload start date (online)	02.07.2020 after 16.30 Hrs
04.	Bid Submission upload end date (online)	23.07.2020 up to 11.00 Hrs
05.	Date of submission of original copies for the cost of Tender documents and Earnest Money Deposit (offline).	25.07.2020 upto 15.00 Hrs
06.	Pre Bid meeting at Howrah Regional Office, date	16.07.2020 at 11.30 Hrs
07.	Date for opening of Technical bid (online) for the Bidders	27.07.2020 after 11.00 Hrs
08.	Date of uploading the Final List of Technically Qualified Bidders after Technical Bid Evaluation (online).	To be intimated later.
09.	Date, for opening of Financial Bid (online).	To be intimated later.

10. **Earnest Money / Bid Guarantee:** The amount of Earnest money @ 2% of the estimated amount put to tender in the shape of Bank Draft or Pay order of any Scheduled Bank to be drawn in favor of the **"West Bengal State Electricity Distribution Company Limited"** payable at Howrah. The bid guarantee shall be valid for 5 (five) calendar months with a claim period up to 3 (three) months from the date of opening of bid.
Bid guarantee of the unsuccessful bidder will be released after finalization of tender against the prayer of the contractor.
No interest shall be payable by WBSEDCL on the above Bid guarantee.
11. **Security Deposit:** In respect of successful Bidder, the Earnest Money after acceptance of Tender shall be converted as a part of the Security Deposit. The successful Bidder who deposited Earnest Money @ 2% (Two percent) of the amount put to the Tender, balance of necessary 10% (Ten percent) Security Deposit shall be realised by recovering from the progressive bill @ 8% (Eight percent) of the amount of each such bill. In all cases the amount of recovery of the Final Bill will be so adjusted as to make the total amount of Security Deposit equivalent to 10% (Ten percent) to the value of work so executed.
12. The Bidder, at his own responsibility and risk is encouraged to visit and examine the site of works and its surroundings and obtained all information that may be necessary for preparing Bid and entering into an agreement for the work / works as

mentioned in the NIT, before submitting offer with full satisfaction. The costs for visiting the working site shall be at the bidder own expense.

13. The intending Bidders shall clearly understand that whatever may be the outcome of the present invitation of the Bid, no cost of Bidding shall be reimbursable by the Tender Inviting Authority. The Tender Inviting Authority reserves the right to accept or reject any / all offer without assigning any reason whatsoever and is not liable for any cost that might have incurred by the Bidder at the stage of Bidding.
14. Prospective applicants are advised to note carefully the minimum qualification criteria as mentioned in “**Instruction to bidders**” stated in Section – “A” before tendering the bids.
15. P.O & Payment of work will be depended on availability of fund. Intending bidders may consider this criteria while submission of tender and quoting their rate through online.
16. No Conditional Bid / Incomplete Tender will be accepted under any circumstances.
17. The intending bidder(s) required to quote the rate **item wise** to tender online considering that no escalation and / or price adjustment will be allowed by the department under any circumstances.
18. At any stage during scrutiny, if it is found that the credential or any other papers which the Bidder uploaded during Bidding process, found incorrect / manufactured / fabricated, that bid will be considered a nonresponsive and outright rejected with forfeiture of Earnest Money and action will be taken as per stipulation of IT Rules in force.
19. Before issuance of Letter of Acceptance / Work order, the tender accepting authority may verify the credential & other documents of the lowest bidder so uploaded online if found necessary. If it is found such document incorrect / manufactured / fabricated, Letter of Acceptance / Work order will not be issued in favor of the bidder under any circumstances and action will be taken accordingly.
20. The Tender Inviting Authority reserves the right to cancel the NIT due to unavoidable circumstances and no claim in this respect will be entertained.

SCOPE OF WORK

BULK POWER SUPPLY WITH CONTRACTUAL DEMAND OF 40 MVA AT 33KV I.R.O. KOLKATA METRO RAIL CORPORATION LIMITED (CON ID 950034738) WITH **Laying, Installation & Erection for drawal of 33 KV U.G. Cable double ckt. of R.L- 6.60 Km, by laying of 33 KV grade : single core: 1000 sq mm XLPE Al. Cable (3 nos to be run with "Trefoil" configuration and one no as spare) along with supply & laying of 24F Armoured Fibre Optics Cable and accessories for each ckt. directly from Howrah 220 KV Sub-Stn. to the premises of M/S KMRCL for an ultimate contact demand of 40 MVA.**

GENERAL INFORMATION AND SCOPE OF WORK FOR LAYING UG CABLES:

1.0. CABLE LAYING:

1.1. Notwithstanding anything stated in these specifications, WBSEDCL reserves the right to assess the bidder's capability to fulfill the scope of the bid, should the circumstances warrant such assessment.

2.0. DESIGN – WORKMANSHIP AND INTERPRETATION OF CLAUSES :

2.1 The design and quality of goods supplied and the workmanship shall be in accordance with the best engineering practice to ensure satisfactory performance of the system throughout the service life.

2.2 The goods and accessories offered shall be complete in all respects. Any material and /or component thought not specifically stated in this specification but is necessary for trouble free and successful operation shall be deemed to be included. All such components, accessories, etc., shall be supplied at no extra cost.

2.3 The goods supplied shall be such that components, accessories of the same type shall be interchangeable. Likewise similar or corresponding parts, components / accessories shall also be interchangeable.

2.4 Wherever and whenever a material or article is specified or described by the name of a particular brand, manufacturer, vendor, the specific item mentioned shall be understood as establishing type, function, quality and not as limiting competition. However bidders may offer other similar components / accessories provided they meet with the required standards, design, duties and performance.

2.5 Goods and accessories so offered shall conform to type test and shall also be subjected to acceptance and routine tests in accordance with the requirements stipulated in this specification. The WBSEDCL reserves the right for repeating any or all of the type tests to be conducted on the goods supplied.

3.0. STANDARDS

3.1. Except as modified by this specification all materials to be supplied shall conform to the requirements of the latest editions of the following standards:

- a) IS 1255 Code of practice for Installation and maintenance of power cables up to and including 33 KV rating
- b) IS 7098 (Part 2) Cross – linked Polyethylene PVC sheathed cables.
- c) IEC 332 Tests on erected cables
- d) IEC 1329 Allied steel, tubes, tubular and other rough iron fittings.
- e) IEC 2629 Recommended practice for hot dip galvanizing of iron & steel.
- f) ASTM-D : 2671 Standard method of testing heat shrinkable or push on Tapex or cold type tubing for electrical use.
- g) ASTM-D 3111 Flexibility determination of hot melt adhesives by mandrel bend test method.
- h) IEC 60 High Voltage test
- i) IS 3043 Code of practice for Earthing
- j) IS 8309 Compression type tubular terminals for aluminum conductors of insulated cable.

4.0. DEVIATION IN SPECIFICATION:

- 4.1. All deviations in specification shall be brought out by the bidder and detailed clause by clause in appropriate annexure form.
- 4.2. Deviations brought out elsewhere or in any other format will not be considered and are liable for rejection. The WBSEDCL in such an event shall also deem that the bidder has conformed to the clauses in this specification scrupulously.
- 4.3. Deviation in specification shall if possible be quoted with reference to standards. The bidder shall then furnish an authentic English version of such standards.

5.0. LOCAL CONDITIONS :

- 5.1. It will be imperative on each bidder to fully inform himself of the local conditions and factors which may have any effect on the execution of the supply and services covered under these documents and specification.
- 5.2. It shall be understood and agreed that such factors will have been properly investigated and considered in any bid that is submitted. The purchaser will entertain no claim for financial adjustment to the contract awarded under these specifications and documents. No change in the time schedule of the contract, or any financial adjustment arising thereof that are based on incorrect information, or its effect on the cost of the contract to the bidder shall be permitted by the Purchaser.
- 5.3. Bidders are advised to visit the various areas where the U.G. cables are access, road / drain / footpath crossings to enable them to make proper costing and then quote accordingly.

6.0. DETAILS OF WORK :

a) The scope of work involves laying, Erection, Installation, testing and commissioning of 33KV double CKT with spare cable in each CKT with single Core, 1000 Sq.mm XLPE UG cable with 24F fibre optical cable in each CKT.

b) Laying of single core, 33 kV, 1000 sqmm UG Cables by trenchless technology adopting horizontal Boring (HDD) by machines with adequate drawing capacity.

6.1. The contract will be on the turnkey basis and all the required materials as per specifications are to be procured by the contractor himself. The specifications for the major equipment to be procured are as follows:

- a) XLPE Cables of above size as per specifications enclosed.
- b) Cable jointing termination and straight through kits as per specifications enclosed.

6.2. All the other materials like coarse and fine aggregate sand, joint markers, sealing, route markers, cable support clamps, terminals and inline connectors, sealing compounds etc., whether specifically mentioned or not in these specifications are deemed to have been included in the scope of supply and installation. Similarly, the contractor has to arrange for all the tools and plants required for the works at his own cost.

7.0. SERVICE CONDITIONS :

- 7.1. The cables are being laid in the Howrah District, West Bengal, where temperature, humidity effect is heavily experienced.
- 7.2. The climatic conditions are prone to wide variations in ambient temperature, humidity etc., and the accessories offered shall be suitable for installation under the above Tender Specification, where moderately hot and humid conditions conducive to dust, rust and fungi growth, prevail at site.
- 7.3. The underground cables are to be laid along Road, Railway crossing, where other utility services like telephone, water supply, drainage system, EHT & HT Cables of WBSEDCL & other Utilities etc are encountered.
- 7.4. Necessary Way leave permission to be taken from the other Utilities before execution of the work.
- 7.5. If any damage happens of any Utility/Public during execution of the work, Agency should compensate if any claim arises and rectification of damaged portion to be done by the Agency.

8.0. CLIMATIC CONDITIONS

Climatic conditions

SI No Particulars Details

1 Location

Howrah, West Bengal

2 Altitude

Not exceed 100 M above

MSL- Almost at the Sea level

3 Max. Ambient air temperature : 45° C

4 Max. Daily average air temp : 35 ° C

5 Minimum ambient air temp : 10 ° C (Max) 5 ° C (Min)

6 Ground temperature at depth of laying assumed : 35 ° C (Max)

7 Isoceraunic level : 45

8 Avg. annual rainfall : 1450 mm

9 Avg. number of rainy days per annum 60

10 Climate :

The climate in the coastal city of Bhubaneswar is Tropical moderately hot and humid.

sub-soil water at certain location at depth of burial of cables may be anticipated .

11 Soil : Bay of the Ganga river.

9.0. COMPLIANCE WITH REGULATIONS :

9.1. All services carried out by the bidder / sub contractor shall be as per the requirements of the I.E. Act-2003 & Indian electricity Rules – 1956, OERC and all other applicable statutory laws governing the services in the state of Odisha

9.2. Particular attention is drawn to the necessity of consulting the local authorities and the administrative heads concerned with the operation and maintenance of roads, railways, telegraph and telephone services, water supply and sewerage and other public utilities.

9.3. The WBSEDCL will assist in obtaining permission from civil authorities for boring in the Roads, cutting roads. However the necessary charges shall be paid by the bidder sufficiently in advance. WBSEDCL will also co-ordinate with the traffic police authorities for regulation of traffic during cutting of roads.

10.0. INSPECTION BY ELECTRICAL INSPECTOR

10.1. All Electrical installations and equipments are to be inspected and approved by the Chief Electrical Inspector to the Government of West Bengal, before commissioning.

10.2. The Contractor will arrange for the payment of the necessary fees for inspection.

10.3. Any defects pointed out by the Electrical Inspector, shall be corrected or attended by the bidder / sub contractor at his own cost and he shall pay, for subsequent inspection charges to the Electrical Inspector, for obtaining approval.

11.0. INSTALLATION OF U.G. CABLES

11.1. Method Of UG Cable Laying : Laying 33 kV HT UG cables at a depth not more than 3 Mtrs, by trenchless technology, adopting horizontal boring using appropriate standard machines. Boring & Drawing of cable including preparation at site

11.2. ROUTE PLANS: Tentative cable route plans will be furnished to the contractors, indicating the roads road crossings, findings by excavating trial holes by the contractor / sub contractor. The work should be taken upon only after WBSEDCL Engineers approve

the final route. The WBSEDCL reserves the right to change, alter deviate the route on technical reasons.

11.3. TRIAL PITS : The bidder shall excavate trial pits, for alignment purpose at appropriate distance apart as warranted by the local conditions, keep a record of the findings and close the trial holes properly to avoid hindrance / accidents to pedestrian traffic. The final route / alignment of the cables shall be decided based on the finding of the trial holes.

11.4. It is the responsibility of the bidder to maintain as far as possible the required statutory clearances from other utility services.

11.5. Any damage caused, inadvertently to any utility services shall be the sole responsibility of the contractor.

12.0. STATUTORY NOTICES AND WAY LEAVES

12.1. The Contractor shall arrange the necessary way leaves from the concerned public utility authorities and WBSEDCL shall give the required assistance to the contractor in completing the project.

13.0. LAYING OF CABLES

13.1. 33 kV H.T Single core HT UG cables:

Laying 33 kV HT UG cables by trenchless technology by adopting horizontal boring at a depth not more than 3 Mtrs using appropriate standard machines.

14.0. LAYING OUT THE CABLE :

14.1. 33 kV H.T Single core HT UG cables:

The cable shall be pulled / drawn smoothly in the bored holes by the horizontal boring machine itself. The excavated cable trench shall be drained of all water and bed surface shall be smooth, uniform and fairly hard before laying out the cable. The cable shall be pulled in the trench only on cable rollers spaced out at uniform intervals to prevent damage to cable. The laying out process shall be smooth and steady, without subjecting the cable to abnormal tension. The cable laid out shall be smoothly and evenly transferred to the ground after providing sand cushion and shall never be dropped. All the snake bends in the cable shall be straightened out.

14.2. Loop Cable : One complete loop of the cable has to be kept at each jointing point and termination point.

15.0. FLAKING

15.1. Wherever it is not possible to lay of the entire cable drum length, the cable should be cut and properly sealed and if it is necessary to remove the cable from the drum, it should be properly flaked. Such cable lengths should be properly stored at site.

16.0. CABLES AND OVER BRIDGES :

16.1. Wherever the cable route crosses bridges the cable shall be laid in the ducts, if provided, by removing and replacing the R.C.C. covers and filled with sand cushion.

16.2. In the absence of the cable ducts over bridges, the cable shall be laid in suitable size steel/G.I. pipes or as directed by the engineer-in-charge and the pipe covered by cement concrete if necessary to protect from direct sun rays.

17.0. CABLE CROSSING OPEN DRAINS WITH LONG SPAN :

17.1. Wherever the cable to cross open drains with a long span, the cable shall be laid in suitable size G.I. pipe, properly jointed with suitable collars. The GI pipe shall be firmly supported on pillars, columns, or suitable support of R.C.C. foundation with stone masonry in cement mortar 1:4

17.2. Wherever the U.G. cable has to cross the sewerage or water supply line the U.G. cable has to be taken below them maintaining adequate clearance. Further wherever the U.G. cable runs parallel to the telephone cable a separation distance of at least 300-mm shall be maintained.

17.3. The cables shall be laid in stoneware pipe wherever the cable and trench crosses private roads, gates, etc. In order to avoid inconvenience the stoneware pipe should be laid first after excavation and excavated trench shall be back filled, compacted and surface properly redone to restore that original condition.

18.0. CABLE AND JOINT MARKERS

18.1. Permanent means of indicating the positions of joints on site should be provided. During the course of permanent reinstatement cable and joint markers, should be laid directly above the route of the cable and the position of the joint respectively.

18.2. Wherever it is not possible to place the marker directly over the cable route or joint the marker should be suitably placed near the cable route or joint on which the distance of the cable route or joint at right angles to and parallel to the marker should be clearly indicated.

18.3. The position of fixing the markers will be at the discretion of the Engineer-in-charge.

19.0. JOINTING OF CABLES

19.1. GENERAL: It shall be noted that the U.G. cables are of XLPE insulation and need special care in jointing. The cable jointer and his assistant shall have experience in making joints / terminations. Jointing work should commence as soon as two or three lengths of cables have been laid. All care should be taken to protect the factory-plumbed cap/seal by laying the end solid in bitumen until such time as the jointing is commenced.

19.2. Jointing of cables in carriage ways, drives, under costly paving, under concrete or asphalt surfaces and in proximity to telephone cables and water mains, should be avoided whenever possible.

19.3. JOINT PITS: The joint pits should be sufficient dimensions as to allow jointers to work with as much freedom of movement and comfort as cables proposed to be jointed. The sides of the pit should be draped with tarpaulin sheet to prevent loose earth from falling on the joint during the course of making. The pit should be well shored with timber, if necessary. An overlap of about 1.0 mtr of the cables to be jointed may be kept, for allowance to adjust the position of the joint. When two or more cables are laid together the joints shall be arranged to be staggered by 2 to 2.5 mtr.

19.4. SUMP PITS: When jointing cables in water logged ground or under monsoon conditions, a sump pit should be excavated at one end of the joint pit in such a position so that the accumulating water can be pumped or bailed out by buckets without causing interference to the jointing operation.

19.5. TENTS: A tent should be used in all circumstances wherever jointing work is carried out in the open irrespective of the weather conditions. The tent should be so covered as to have only one entrance and the back facing the direction of the wind. The tent cover should be properly weighted or tied down on the sides.

19.6. MEASUREMENT OF INSULATION RESISTANCE: Before jointing is commenced the insulation resistance of both sections of the cable to be jointed should be checked by insulation resistance testing instrument. An insulation resistance – testing instrument of

2.5/5 kV shall be used. The Insulation Resistance values, between phases and phase to earth shall be recorded. The actual jointing operation shall start only after the approval of the engineer in charge of works.

19.7. PRECAUTIONS BEFORE MAKING A JOINT OR CUTTING A CABLE.

The cable end seals should not be opened until all necessary precautions have been taken to prevent circumstances arising out of rainy/inclement weather conditions, which might become uncontrollable. The cable seals should be examined to ascertain if they are intact and also that the cable ends are not damaged, if the seals are found broken or the lead sheath punctured, the cable ends should not be jointed until after due examination and testing by the engineer-in-charge of the works.

19.8. PRECAUTIONS TO BE TAKEN ON LIVE CABLES IN SERVICE

Sometimes it becomes necessary that a H.V. cable, which is in service, be cut for making a straight joint with a new cable. In such cases work on joint should start only after the in-service cable is properly identified, isolated, discharged, tested and effectively earthed. Search coils interrupters or cable-identifying instruments should be used for this purpose.

19.9. IDENTIFICATION NUMBERS / COLOURS AND PHASING : The cables should be laid and jointed number to number or colour to colour shown on the core identifying marks and prevent cross jointing. In all cases, the cables should be tested and phased out, and more particularly so when the cable terminates at Ring Main Unit / Sub-station.

19.10. MAKING A JOINT: The Heat shrinkable joints used shall be conform to the specification vide Annexe 2. Alternatively push-on or Tapex or cold shrinkable type can be used with the approval of WBSEDCL. The contractor should furnish all the technical particulars of these joints and obtain approval only in case they are found superior to the heat shrinkable joints. Epoxy based joints are not permitted. Comprehensive jointing instructions obtained from the manufacturer of joint kits shall be meticulously followed. The connection of the earth wires should be done using flexible bonds connected to cable sheath using clips or soldering. Aluminum conductor strands shall be joined by mechanical compression method, using suitable die and sleeve with a good quality tool. The joints shall conform to specification as per IS 13573-1992.

19.11. TRANSITION JOINTS: Wherever straight through joints will have to be made with existing cables under the following conditions, the contractor shall arrange such type of joints and execute them with skilled jointers.

- (1) Between cables having two different types of insulation viz., paper and XLPE
- (2) Between cables having two different types of conductor material, viz. copper and aluminum.
- (3) Or a combination of the above

The transition joints shall conform to IS 13705 – Transition joints for cables for working voltages from 11 KV upto and including 33 KV – performance requirements and type tests.

19.12. CABLE TERMINATIONS: Cable terminations required are both indoor and outdoor type and invariably be of heat shrinkable type conforming to the specifications vide Annexe 2. Alternatively push-on or Tapex or cold shrinkable type can be used with the approval of WBSEDCL with appropriate sheds for rainwater in case of outdoor terminations. All the technical particulars to establish the superiority in the performance of these joints shall be furnished while seeking approval. The terminations shall conform to specifications as per IS 13573 – 1992. The instructions furnished by the manufacturer of termination boxes/kits should strictly be followed.

19.13. Whenever a cable raised from the trench to end in termination, to be finally connected to an overhead line or transformer, the following instructions should be complied with –

- (i) One coil to be made and left in the ground for future needs
- (ii) The rise of cable, immediately from the ground level should be enclosed in suitable diameter GI pipe to height of 2 mt.
- (iii) The balance portion of the cable should be neatly curved, in 'S' shape.
- (iv) The cable and pipe should be properly fastened by using appropriate clamps/support. The hardware of clamps shall be painted with red oxide and enamel paint or galvanized.
- (v) The lugs on the termination shall be compressed with a suitable compression tool.

20.0. EARTHING AND BONDING

20.1. The metal sheath and Armour should be efficiently bonded and earthed at all terminals to earth electrodes provided. The cross sectional area of the bond shall be such that the resistance of each bond connection shall not exceed the combined resistance of an

equal length of the metal sheath and Armour of the cable.

21.0. TESTING AFTER LAYING AND JOINTING

21.1. All cables after laying and jointing works are completed should be tested systematically and insulation and pressure tests should be made on all underground cables.

21.2. All test results should be recorded in tabular form in logbooks kept for the purpose

21.3. The cable cores should be tested for :-

- (i) Continuity
- (ii) Absence of cross phasing
- (iii) Insulation resistance to earth; insulation resistance between conductors.

22.0. H.V. TESTS

22.1. After the laying and jointing work is completed, a high voltage test should be applied to the cable to ensure that the cable has not been damaged during or after the laying operations and there is no defect in the joining

22.2. The high voltage tests should be as per IS 1255 or as per international standards. The H.V. testing instruments shall be brought by the turn key contractor.

23.0. TESTING AND RECORD OF CABLE CONSTANTS :

23.1. When the cable is ready, just before commissioning, the cable constants viz, the resistance, capacitance and inductance of each conductor should be determined and recorded, along with frequency at which the values of capacitance and inductance are determined.

24.0. GUARANTEE

24.1. All the cable joints / termination done by the contractor shall be guaranteed for 12 months from the date of energisation of the complete cable. In the event of failure during the guarantee period, the restoration work shall be done free of cost by the contractor within 24 hours of giving notice or else the expenditure incurred by WBSEDCL to re-do the joint / termination will be recovered from the performance guarantee amount held with the WBSEDCL.

25.0. CABLE RECORDS

25.1. Accurate neat plans / sketches, drawn to suitable scale (1 cm = 10M) should be prepared and furnished by the contractor after the completion of each work.

25.2. All relevant information should be collected at site, during the progress of work and preserved for preparation of drawings.

25.3. The following essential data should be incorporated on all drawings

- a) Size, type of cable or cables.
- b) Location of the cable in relation to prominent land mark property, Kerb-line etc., with depths.
- c) The cross section showing where cables are laid in pipes or ducts, giving their sizes, type and depths.
- d) Position and type of all joints
- e) Location of other cables which run alongside or across the cable route.
- f) Position and depths of all pipes, ducts, etc., which are met as obstruction to the cable route.
- g) Accurate lengths from joint to joint
- h) Manufacturers name and drum number of the cable, between sections / joint to joint. Two transparencies and six blue print copies of the cable records prepared as above shall be given to the WBSEDCL's engineer as a part of the contract as soon as the cable is charged.

ROUTE SURVEY

The bidder shall fully familiarize himself with the site and route conditions etc. The bidders are advised to visit the site and acquaint themselves with the topography, infrastructure etc. The contractor shall be fully responsible for providing all equipment, materials, system and services specified or otherwise which are required to complete the erection and successful commissioning of cable in all respects. All materials required for the Civil and construction/installation work shall be supplied by the Contractor. The complete design and detailed engineering shall be done by the Contractor.

I) RIGHT OF WAY:

- (a)** Any right of way, which may be required by the contractor for execution of cable CKT, shall be arranged by him. The approval from civil authorities, P&T authorities and other agencies / Government as required shall be arranged by the contractor at appropriate time. Obtaining approval of the above proposal is the contractor's responsibility. **However, WBSEDCL will arrange initial ROW clearance from Howrah Municipal Corporation for the proposed alignment & necessary road restoration charge as applicable will be paid by the department separately beyond the scope of instant tender.**

- (b)** Collection of details of other utilities: Contractor shall arrange information about existing underground facilities for

the proposed routes. To do so as built drawing or route index diagram for various services viz. water works, electric supply utilities, telecom services providers, public health, gas/oil authorities etc. may be collected from the concerned authorities. In case details are not available, the Contractor shall assess suitably by conducting enquiries and surveys.

TECHNICAL SPECIFICATION OF 24 F, ARMoured OFC and jointing kits:

1.0 General

Armoured fibre optic cable shall be suitable for installation in pipes as well as suitable for direct burial inside trenches installation. The armoured fibre optic cable shall be suitable for installation and laying along the Power Cable. The cable shall be rodent, termite proof, field proven and type tested. The cable should be of low weight, small volume and high flexibility. The mechanical design and construction of each unit shall be inherently robust and rigid under all condition of operation, adjustment, replacement, storage and transport.

All necessary hardware, software and other accessories delivered as part of communication network shall be field proven type tested and should be latest modified version.

1.1 Fibre Type(s) and Counts

The cable shall contain 24 nos. of Dual Window Single Mode (DWSM) fibres.

1.2 Optical Characteristics

Dual Window Single Mode (DWSM) fibre shall conform to the ITU-T Recommendations G.652D. However, the attenuation coefficient of the fibre to be supplied in the cable shall be as follows :

@ 1310nm \leq 0.35 dB/km, @ 1550nm \leq 0.20 dB/km.

The overall optical fibre path attenuation including all optical cable losses caused by bending, compression, splicing and terminations shall be less than 0.25dB/km @ 1500nm. Excessive splice or coupling losses demonstrated as resulting from fibre mismatch with dissimilar fibre, shall be documented and to be submitted.

1.3 Applicable Standards

The fibre/cable shall conform to the latest relevant IEC/IEEE/IS/EIA/ASTM etc. standards.

1.4. Allowable System Outage:

The system outage is defined as an actual measured value determined during the Guaranteed System Availability Test (GSAT). The actual availability achieved at the end of the GSAT duration would be calculated jointly by the contractor's representative and WBSETCL's representative.

During the GSAT duration no failure in fibres/cables and associated hardware fittings & accessories, splice enclosures and FODPs etc. shall be acceptable.

2.0 General Construction for Armoured Fibre Optic Cable.

The optical cable shall consist of a central fibre optic unit protected by one or more layers of helically or reverse lay (SZ) wound anti-hygroscopic tape or yarn. The central fibre optic unit shall be designed to house and protect the fibres from damage due to forces such as crushing, bending, twisting, tensile stress and moisture, wide temperature variations, hydrogen evolution etc. The fibre shall be of loose tube construction. Gel filled loose buffer fibre is preferable. The inner polyethylene jacket, armouring tape, outer sheath jackets etc. shall be uniform, free from pinholes, joints, splits or any other defects.

The armoured Cable shall be a UV resistant fire retardant rodent proof, with steel tape, corrugated tube or galvanized wire type armour construction cable. The cable shall be suitable for direct burial, laying in trenches & PVC/Hume ducts, laying under false flooring and on indoor or outdoor cable raceways and shall have minimum 3.0 mm outer jacket thickness.

All fibre optic cable shall have a minimum service life span of 25 years.

2.1 The cable construction and mechanical parameters for the armoured OFC shall be as specified in the Table below :

Table
Cable Construction and Mechanical parameters :

Parameter	Units	
No. of fibers in the cable		24F
Type of fibers		Single Mode
No. of fibers per tube		4
No. of loose tubes		6
No. of dummy		1
Cable diameter nominal tolerance	mm	16.1
	mm	± 0.5
Cable Weight	Kg/Km	250-280
Temperature dependence		Induced attenuation ≤ 0.05 dB/km (-60°C to 85°C)
Temperature - humidity cycling - 10°C \pm 85°C (85-95% RH)		Induced attenuation ≤ 0.05 dB/km
Max Continuous length		4km \pm 5%
Cable Design Life		More than 25 years.

3.0 Cable drums, Marking, Packaging and Transport

All optical fibre cable shall be supplied in strong wooden drums provided with lagging with adequate strength, constructed to protect the cabling against all damage and displacement during transit, storage and subsequent handling during installation. The cable drum shall be suitable to carry fibre optic cable of length of 4 Km \pm 5%. Both cable ends in the drum shall be sealed and shall be readily accessible. The drum shall be marked with arrows to indicate the direction of rotation. Both the ends of the cable shall be provided with pulling eye. The pulling eye and its coupling system shall withstand the same tensile load as applicable to the cable. The following marking shall be done on each side of the cable drums.

- i) Manufacturer/Suppliers name and address
- ii) Type of cable
- iii) Number of fibres
- iv) Type of fibres
- v) Year of manufacturing, month & batch no.
- vi) Total cable length

Packing list supplied with each drum shall have all the information provided on marking on the respective cable drum and following additional information: OTDR length measurement of each fibre and ratio of fibre and cable length.

4.0 Optical fibre cable marking

A suitable marking shall be applied in order to identify this cable from other cables.

5.0 Methodology for installation and Termination

All optical fibre cable installation, stringing and handling plans, guides and procedures, and engineering analysis (e.g. tension, sag, vibration etc.) shall be submitted to the Employer for review and approval in the engineering/design phase of the project, prior to establishing the final cable lengths for manufacture. Installation procedures including details of personnel and time required shall be documented in detail and submitted to Employer for approval. All installation practices shall be field proven and ISO accredited.

All cable segments shall include service loops. The maximum allowable stringing tension, maximum allowable torsional shear stress, crush strength and other physical parameters of the cable shall not be exceeded. The preventative measures to be taken shall be documented in detail and submitted to Employer in advance of installation.

Optical fibre attenuation shall be measured after installation and before splicing. Any increase in attenuation or step discontinuity in attenuation shall not be acceptable and shall constitute a cable segment failure. In the event of cable damage, the complete span shall be replaced as mid-span joints are not acceptable.

Any or all additional steel work of modifications required to lay the fibre cabling to the along the power cable shall also be carried out by the Contractor. The Contractor shall supply all tools and accessories required for installation. It shall be the Contractors responsibility to provide adequate communications among all crew members and support staff to ensure safe and successful installations.

6.0 Installation of Cable :

A network of cable trenches and / of ducts may exist at some sites but shall require expansion and / or new construction at stations. It shall be a responsibility of the Contractor to co-operate fully with the Employer and all other on-going project Contractors in the planning and efficient use of existing and new-construction infrastructure supporting on-station communications cabling. The existing cable trenches / cable raceways proposed to be used shall be identified in the survey report. The contractor shall make its best effort to route the cable through the existing available cable trenches. Where suitable existing cable trenches are not available, suitable alternatives shall be proposed for Employer's approval. The contractor shall provide any additional outdoor cable raceways and / or cable trenches required for such approved alternative.

It may be noted that in order to utilise the existing trenches, the cable may be required to be co-located with HV and LV cables. Accordingly, the cable shall be installed in corrosion resistant flexible conduit. Suitable provisions shall be made by the Contractor to ensure adequate safety earthing and insulated protection for the approach cable.

Cables existing from the ground or passing through floors shall be protected against mechanical damage.

Cables shall penetrate buildings through cable ducts. The cabling shall route within buildings in cable raceways or under raised floors. The Contractor may utilise existing ducts, building penetration, cable trays, racks, etc. where appropriate and approved by the Employer. The cables shall be affixed to cable supports using approved ties, clips or cleats at regular intervals.

On short cable runs for which cable supports are not required, the Contractor shall fix the cable to the structure of the building using approved fixing and cable cleats.

The Contractor shall be responsible for new building penetrations required for cabling. Caution shall be taken to ensure that existing equipment and site personnel are protected from dust and debris incident to the cable penetration work. Penetrations shall be neatly formed and sealed for protection from moisture, dust, wind and vermin intrusion.

All required fittings, supports accessories, ducts, inner ducts, conduits, risers and any item not specially mentioned but required for lay and installation of approach cables shall be supplied and installed by the Contractor.

7.0 Cable Raceways :

The Contractor is required to provide and install any additional indoor cable raceways which may be required for proper implementation of the fibre optic cabling system the cable raceways shall conform with the following :

- a) All cable raceways shall be sized to support full loading requirements plus at least a 200% safety loading factor.
- b) Indoor cable raceways shall be fabricated from construction grade aluminium, galvanized iron or anodized sheet metal or any other suitable material approved by the Employer. Suitable anti-corrosion measures shall be provided steel fabricated raceways shall be finished inside and out, treated to resist rust and to form a metal-to-paint bond.
- c) Mechanical construction drawings of the cable raceways shall be submitted for Employer's information and review.

8.0 INSPECTION AND TESTS

8.1 TYPE TESTS:

Type Test for Indigenous or fully Imported Materials:

The offered equipment must have fully type tested as per relevant ISs and / or any other specified international standards, during the last five years period reckoned from the date of opening of the tender. Photocopy of such type test reports/certificates must be submitted. The type test certificates of prototype manufactured and tested by foreign collaborators of the tenderers at their works shall not be acceptable for indigenously manufactured equipment. If type test reports of any type test/tests is/are not submitted by the proposed sub-vendor carried out within last 5 (five) years, the same shall be conducted in presence of WBSEDCL representative at vendor's cost..

Inspection

The material for final inspection shall be offered by the Contractor only under packed condition. The employer shall select samples at random from the packed lot for carrying out acceptance test.

Certificate of manufacturing tests shall be maintained by the Contractor and be produced for verification as and when desired by the Employer.

ACCEPTANCE CRITERIA FOR ARMOURED OFC

OFC CONSTRUCTION PARAMETERS

Parameters	Units	Acceptance Criteria	
		Armoured	Unarmoured
No. of fibers in the cable	No.	24F	24F
Type of fibers		Single Mode	Single Mode
No. of fibers per tube	No.	4 for 24F	4 for 24F
No. of loose tubes	No.	6 for 24F	6 for 24F
No. of dummy	No.	1 for 24F	1 for 24F
Cable diameter (Nominal/tolerance)	mm	16.1 ± 0.5 for 24F	13.4 ± 0.5 for 24F
Cable Weight	Kg/km	250-280 for 24F	145-161 for 24F
Max Continuous length of cable	Km	4km ± 5%	4km ± 5%
Rip Cord (s)		Should be available	Should be available
Physical dimension		Should meet the technical requirement	Should meet the technical requirement
Fiber Continuity with OTDR		Should be continuous	Should be continuous
Fiber Attenuation with OTDR at 1550 nm	dB/km	≤ 0.20 dB/km	≤ 0.20 dB/km
Fiber Attenuation with OTDR at	dB/km	≤ 0.35 dB/km	≤ 0.35 dB/km

1310 mm			
Sheath/Inner Jacket			
i) Material		High Density Polyethylene-HDPE (Black)	High Density Polyethylene-HDPE (Black)
ii) Thickness		≥1.5mm	≥1.8mm
Outer Jacket/Termite Protection			
i) Material		HDPE (Red/Black)	
ii) Thickness		≥3mm	≥0.65mm
Armouring			
iii) Material		Stainless Steel Alloy	-
iv) Thickness		≥0.125mm	-

FAT/OFC Acceptance Criteria :

The Contractor shall submit Type Approval Certificate from TEC for WBSEDCL's requirement of fiber/OFC as specified in the Technical Specifications.

Prior to acceptance, cable drums shall be tested for compliance to the acceptance criteria enclosed at Annex-I wherein the following measurements shall also be carried out before acceptance of each cable drum:

- i) Physical Check of the cable
- ii) Optical fiber continuity
- iii) fiber attenuation with OTDR ($\leq 0.20\text{dB/km}$ @ 1550nm & $\leq 0.35\text{dB}$ @ 1310 nm).
- iv) Max. Tensile Strength As per IEC60794-1-E1
- v) Cable Bend Test As per IEC60794-1-E11
- vi) Repeated Bending Test As per EIA-455-104
- vii) Crush Strength As per IEC60794-1-E3
- viii) Impact Test As per IEC60794-1-E4
- ix) Torsion resistance As per IEC60794-1-E7
- x) Kink Test As per IEC60794-1-E10
- xi) Drip Test on cable As per TEC procedure
- xii) Sheath to ground dielectric strength test As per IEC60794-1-F3
- xiii) Sheath/Inner Jacket i) Material, ii) Thickness
- xiv) Outer Jacket/Termite Protection i) Material, ii) Thickness
- xv) Armouring i) Material, ii) Thickness

8.2 Site Acceptance Tests

During the course of installation the Employer shall have full access for inspection of the progress of the work and for checking workmanship and accuracy as may be required. On completion of the work prior to commissioning, all equipment shall be tested to the satisfaction of the Employer to demonstrate that it is entirely suitable for commercial operation.

The tests shall be carried out in the presence of and to the satisfaction of the Employer by the qualified technical representatives of the Contractor.

Prior to installation every spooled fibre optic cable segment shall be tested for compliance with the Pre-shipment data previously received from the manufacturer. This requirement will preclude the installation of out of specification cable segments that may have been damaged during shipment.

During the installation, spliced cable segments shall be tested and documented. Upon completion of a continuous cable path all fibres within the cable path shall be demonstrated for acceptance of the cable path. Fibre Optic cable field testing minimum requirements are provided in the following tables.

Fibre Optic Cable Pre-Installation Testing

<u>Item</u>	<u>Description</u>
1	Physical Inspection of the cable assembly for damage
2	Optical fibre continuity end-to-end
3	Per fibre OTDR

Fibre Optic Cable Splice Testing

<u>Item</u>	<u>Description</u>
1	Per Splice Attenuation
2	Per splice OTDR
3	Physical inspection of splice box/enclosure for proper fibre routing techniques.
4	Physical inspection of sealing techniques, weatherproofing, etc.

9.0 MISCELLANEOUS SUPPLIES

The Contractor shall provide all required consumable and non-consumable supplies necessary to support all installation and test activities through final operational acceptance.

10.0 MAINTENANCE SUPPORT FACILITIES IN INDIA

The Bidder shall describe his own maintenance support capabilities and facilities in India in his technical bid.

11.0 Other Services

The following services shall be included in the proposal.

- a) The contractor shall borne all necessary charges for inspecting and testing of Fibre Optic Cable including to and fro journey, boarding and lodging for the WBSEDCL representative.

The contractor shall submit the Guaranteed Technical Particulars (GTP), Manufacturer's Routine Test Reports as per applicable standards to meet the acceptance criteria mentioned above.

TECHNICAL SPECIFICATIONS FOR HEAT SHRINKABLE CABLE JOINT KITS FOR CABLE TERMINATIONS AND JOINTS

1.0 GENERAL:

1.1 The term heat shrink refers to extruded or molded polymeric materials which are cross linked to develop elastic memory and supplied in expanded or deformed size or shape. The manufacturer of kits besides stating the properties of each component of the kit as indicated below and as per the detailed specifications should also state the source of origin of each component viz; whether locally manufactured or imported in raw material form and processed. The manufacturing activity carried out on each component should be stated. Also, in case the kit is assembled with components imported from two or more foreign suppliers, the manufacturers should give documentary proof supported by the foreign manufacturers confirming that the kit assembled utilizing components of different suppliers are guaranteed by them.

2.0 QUALIFYING EXPERIENCE:

2.1. The kits should have satisfactory performance record in India in excess of 5 years supported with proof of customers having had satisfactory use of these kits in excess of 5 years.

3.0 HEAT SHRINKABLE MATERIAL:

3.1. The heat shrinkable material component used in the joint shall have been produced in a systematic procedure as follows:

- a) The required materials shall be mixed and extruded into the required shape and then crosslinked by irradiation or any other appropriate chemical process. The components are then warmed and stretched by a predetermined amount and allowed to cool in the extruded shape. The cross-linking shall create a memory and when heated again, the same shall come back to its original shape at which it was cross-linked. Heat shrinkable tubes can be reduced to 30% of its expanded dimension by heating.
- b) The volume resistivity of the sleeves shall be 108 ohm-cm and the dielectric constant of around 15 to 30. The limiting temperature shall not be less than 100°C for longer duration and 250°C for one minute.

4.0 TYPE TEST REPORTS:

The Joints and terminations should have been subjected to all the type tests and type test reports not later than 5 years on the day of Bid opening shall be furnished for verification.

5.0 ELECTRICAL CLEARANCES:

The electrical clearances required for a Indoor/Outdoor termination and a straight through joint is shall be as per standards

6.0 COMPRESSION TYPE TUBULAR TERMINAL ENDS:

The materials used in the terminals shall be Aluminum of grade 19501 conforming to IS5082 - Specifications for wrought aluminum and aluminum alloys bars, rods, tubes and sections for electrical purposes. The finish inside the barrel shall either be suitably roughened throughout the crimping length of terminal end or provided with suitable grease. Tender Specification for Construction of 33kV new line. Edges and corners shall be free from burrs and sharp edges. The terminals shall meet the requirements of IS 8309 - Specification for Compression type tubular terminal ends for aluminum conductors of insulated cables.

7.0 JOINT KITS:

The requirements contained in a typical joint Kit are as follows:

- a) Heat shrinkable or push-on or Tapex or cold shrinkable type clear insulating tubes
- b) Stress control tubing where necessary
- c) Ferrule insulating tubing for joints.
- d) Conductive cable break outs for terminations, non tracking, erosion and
- e) Weather resistant tubing both outer / inner
- f) Non tracking erosions and weather resistant outdoor sheds in case of terminations
- g) High permittivity mastic wedge Insulating mastic.
- h) Aluminum crimping lugs of ISI specification.
- i) Tinned copper braids
- j) Wrap around mechanical protection for joints.
- k) Cleaning solvents, abrasive strips.
- l) Plumbing metal.
- m) Binding wire etc. adequate in quantity and dimensions to meet the service and test conditions.
- n) The kit shall contain a leaflet consisting of detailed installation instructions and shall be properly packed with shelf life of over 3 years.

8.0 LIST OF MANUFACTURERS:

- a) RECHEM
- b) 3M

The bidders can only offer the above manufacturer's equipments.

ANNEXURE - I

SPECIFICATIONS FOR MATERIAL PROPERTIES AND OTHER TECHNICAL REQUIREMENTS FOR HEAT SHRINKABLE CABLE TERMINATIONS AND JOINTS SUITABLE FOR 33 kV SCREENED CABLES/XLPE CABLES

1.0 GENERAL:

The term heat shrink refers to extruded or molded polymeric materials which are cross linked to develop elastic memory and supplied in expanded or deformed size or shape. The subsequent heating results in shrinking down to original size and shape. The manufacturer of kits besides stating the properties of each component of the kit as indicated below and as per the detailed specifications given in **Enclosures-I(A), I(B) & I(C)** should also state the source of origin of each component viz; whether locally manufactured or imported in raw material form and processed. The manufacturing activity carried out on each component should be stated. Also, in case the kit is assembled with components imported from two or more foreign suppliers, the manufacturers

should give documentary proof supported by the foreign manufacturers confirming that the kit assembled utilizing components of different suppliers are guaranteed by them.

2.0 QUALIFYING EXPERIENCE:

The kits should have satisfactory performance record in India in excess of 5 years supported with proof of customers having had satisfactory use of these kits in excess of 5 years.

3.0 PERFORMANCE TESTING AT CPRI, BANGALORE:

The successful contractor/bidder should undertake the testing of termination and jointing kits at CPRI in the presence of WBSEDCL Engineers as per the performance type test sequence given below. For this purpose, the kit shall be selected by WBSEDCL Engineers in the manufacturer's premises and sealed by the Engineer before taking it to CPRI, Bangalore.

Typical atmospheric conditions during the tests

SI No Particulars Details

Maximum 450 C

1 Amb. Temperature

Minimum 100 C

2 Atmospheric pressure 963 to 987 m. bar

3 Relative

SECTION – A INSTRUCTION TO BIDDERS

A. General guidance for e-Tendering

Instructions / Guidelines for tenders for electronic submission of the tenders online have been annexed for assisting the contractors to participate in e-Tendering.

1. Registration of Contractor:

Any contractor willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement system, through logging on to <https://wbttenders.gov.in> (the web portal). The contractor is to click on the link for e-Tendering site as given on the web portal.

2. Digital Signature certificate (DSC):

Each contractor is required to obtain a class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders, from the approved service provider of the National Information's Centre (NIC) on payment of requisite amount. Details are available at the Web Site stated in Clause-2 of Guideline to Bidder DSC is given as a USB e-Token.

3. The contractor can search & download NIT & Tender Documents electronically from computer once he logs on to the website mentioned in Clause 2 using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.

4. Submission of Tenders:

Tenders are to be submitted through online to the website in two folders at a time for each work, one in Technical Proposal & the other in Financial Proposal before the prescribed date & time using the Digital

Signature Certificate (DSC). The documents are to be uploaded (virus scanned copy) duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).

4.1. Technical proposal:

The Technical proposal should contain scanned copies of the following in two covers (folders).

4.1.1. Statutory Cover file Containing:

a) Bank Draft / Bankers Cheque / Pay Order towards cost of tender documents as prescribed in the NIT, **against each serial of work** of any Scheduled Bank in favor of "West Bengal State Electricity Distribution Company Limited" payable at Howrah.

b) Bank Draft / Bankers Cheque / Pay Order towards earnest money (EMD) as prescribed in the NIT against each of the serial of work of any Scheduled Bank in favor of "West Bengal State Electricity Distribution Company Limited" payable at Howrah.

4.1.2. Non Statutory / Technical Document Cover file Containing:

a) Copy of I.T. return for last 3 (three) financial years, PAN.

b) GST registration certificate, if applicable.

c) Professional Tax Clearance Certificate / Professional Tax (PT) deposit receipt challan for the last month.

d) EPF registration certificate and challan for last month.

- e) E.S.I Registration (if applicable).
- f) Requisite Credential Certificate for completion of at least one similar nature of work in any power utility having a magnitude of at least)
- a) contract value in a single contract during last seven years, not below Rs 80 % of total quoted value.
- b) contract value in a 02 nos contract during last seven years, not below Rs 50 % of total quoted value.
- c) contract value in a 03 nos contract during last seven years, not below Rs 40 % of total quoted value.

Note: Failure of submission of any of the above mentioned documents will render the tender liable to be rejected for both statutory & non statutory cover.

THE ABOVE STATED NON-STATUTORY / TECHNICAL DOCUMENTS SHOULD BE ARRANGED IN THE FOLLOWING MANNER

Click the check boxes beside the necessary documents in the My Document list and then click the tab “**Submit NonStatutory Documents**”to send the selected documents to Non-Statutory folder.Next Click the tab “**Click to Encrypt and upload**” and then click the “**Technical**” Folder to upload the Technical Documents.

Sl. No.	Category Name	Sub-category Description	Details
01.	Certificates	Certificates	<ul style="list-style-type: none"> a) PAN Card. b) Copy of I.T. return for last 3 (three) financial years. c) GST registration certificate, if applicable. d) Professional Tax Clearance Certificate for the last month. e) EPF registration certificate and challan for last month. f) E.S.I Registration (if applicable).
02.	Company Detail(s)	Company Detail	Trade License in respect of the prospective Bidder, Proprietorship Firm (Trade License), Partnership Firm (Partnership Deed, Trade License) Ltd Company (Incorporation certificate, Trade License)
03.	Credentials	Credential	<ul style="list-style-type: none"> a) Requisite Credential Certificate for completion of at least one similar nature of work in any Govt. Dept having magnitude of <ul style="list-style-type: none"> a) contract value in a single contract during last seven years, not below Rs 80 % of total quoted value. b) contract value in a 02 nos contract during last seven years, not below Rs 50 % of total quoted value. c) contract value in a 03 nos contract during last seven years, not below Rs 40 % of total quoted value. b) Documents of Credential (in the form of work completion certificates and payment certificates) of executing similar nature of works.
04.	Financial Information	Financial Information	<ul style="list-style-type: none"> a) Copy of IT returns for last 3 financial years.
05.	Tender Fee	Tender Fee	<ul style="list-style-type: none"> a) Scanned copy of Bank Draft / Bankers Cheque / Pay Order.(To be enclosed alongwith the non statutory/technical documents packet)

N.B.-The scanned copy of Bank Draft/Bankers Cheque of the EMD (Earnest Money Deposit) is to be enclosed in the Financial Packet Section(ie in the BOQ Section)

4.1.3. Opening of Technical proposal:

Technical proposals will be opened by the **Tender Committee**, Howrah Regional Office, WBSEDCL, and his authorized representative electronically from the web site stated using their Digital Signature Certificate (DSC).

- a) Intending tenderers may remain present if they so desire.
- b) Cover (folder) for Statutory Documents will be opened first and if found in order, cover (folder) for Non-Statutory Documents will be opened. If there is any deficiency in the Statutory Documents the tender will summarily be rejected.
- c) Summary list of technically qualified tenderers will be uploaded online.
- d) Pursuant to scrutiny & decision of the Department, the list of eligible tenderers will be uploaded in the web portal.

4.2. Financial proposal:

The financial proposal should contain the following documents in one cover (folder) i.e. Bill of quantities (BOQ). The contractor is to quote the rate itemwise online through Computer in the space marked for quoting rate in the BOQ.

Only downloaded copies of the above documents are to be uploaded virus scanned & Digitally Signed by the contractor.

5. Penalty for suppression / distortion of facts:

If any tenderer fails to produce the original hard copies of the document like Completion Certificate and any other documents on demand of the department within a specified time frame or if any deviation is detected in the original copies from the uploaded soft copies, it may be treated as submission of false documents by the tenderer and action may be referred to the appropriate authority for prosecution as per relevant IT Act.

6. Rejection of Bid:

The Employer (Tender Accepting Authority) reserves the right to accept or reject any Bid and to cancel the Bidding processes and reject all Bids at any time prior to the Award of Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the ground for Employer's (Tender Accepting Authority) action.

7. Award of Contract:

The bidder who's Bid has been accepted will be notified by the Tender Inviting & Accepting Authority through Acceptance Letter / Letter of Acceptance. The notification of award will constitute the formation of the contract.

8. The agreement as per enclosed format in G.C.C. will incorporate all agreements between the Tender Accepting Authority and the successful bidder. All the tender documents including NIT and BOQ will be part of the documents. After acceptance of Letter of Acceptance, the successful bidder shall have to submit requisite copies of contract documents stated in NIT of the concerned work within time limit to be set in the letter of acceptance.

SECTION – B

GENERAL CONDITIONS OF CONTRACT AND SPECIFICATION FOR ELECTRICAL WORKS

1. Any contractor willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement system, through logging on to <http://wbtedders.gov.in> (the web portal). The contractor is to click on the link for e-Tendering site as given in the web portal.
2. The intending bidder(s) required to quote the rate itemwise in the **BOQ**.
 - a. The quoted price should be firm. There will be no price variation during the pendency of the contract period or thereafter. Bidders are in no way allowed to get any escalation of price against the contract. Price indicated in the schedule of prices deemed to include all the levies / duties / cess & all other incidentals payable as per statute. Relevant Service Tax rules are applicable for the work. The estimated cost is exclusive of Service Tax. It will be paid to the appropriate authority / agency as per prevailing rates and rules in force
3. WBSEDCL, who do not bind itself to accept the lowest tender, reserves the right to accept or reject any bid and to **annual** the Bidding processes and reject all Bids at any time prior to the Award of Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the ground for WBSEDCL's (Tender Accepting Authority) action.
4. Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the contractors, who resort to canvassing will be liable to rejection.

5. Bids shall remain valid for a period not less than 180 (One hundred eighty) days after date of Bid opening of tender.
6. Earnest Money as per NIT should be submitted with the tender in the form of Bank Draft / Bankers Cheque / Pay Order issued from any Scheduled Bank in favor of the **“West Bengal State Electricity Distribution Company Limited”** payable at Howrah.

7. Security Money:

The Successful tenderer within 7 (seven) days of receipt of LOI / order, shall submit his unconditional acceptance in writing failing which the Department shall have the right to terminate the LOI / Order as per rule and earnest money, submitted along with the tender will be forfeited. On receiving tenderer's acceptance for the work the earnest money deposited with the tender will be automatically converted to form a part of security money deposited. **An additional sum of security money, if required, shall be deposited by the tenderer to constitute initial security money of 2% (two percent) of ordered value. Further additional security money shall be deducted from the progressive bills at 8% (eight percent) of each such bill so that the total deduction together with 2% (two percent) Security money already taken shall constitute not less than 10% (ten percent) of the total value of works as actually done.** All security money shall be refunded after expiry of the period of maintenance which shall be one year normally, if not otherwise mentioned in the work order) after completion of the work. This period of maintenance shall be counted from the date of completion of job.

8. Defect Liability Period:

The term „Defect Liability Period“ shall mean the period of 12 (twelve) months from the date of completion of the work. If any defect is found within the defect liability period, the contractor shall be liable to rectify / replace the material at their own cost and responsibility. Defects / rectification work so notified shall have to be attended and completed satisfactorily **within 15 (fifteen) days**. For faithful & due fulfillment of all obligations, this defect liability period shall be covered by the Security money already retained from the contractor. After completion of Defect liability period, and on completion of satisfaction rectification of defect, if any reported within the defect liability period, and on receipt of the application from the contractor, controlling officer of the work shall recommend for refund of the Security money.

9. Definition of terms:

In writing these General Conditions of Contract, Specification and Bill of Quantity / Bidding Schedule (Schedule of work), the following words shall have normally the meanings here-in-after indicated unless there is something in the subject matter of content inconsistent with such construction.

- The *Company / Purchaser / Owner / Department* shall mean the WEST BENGAL STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED (WBSEDCL), having its office at **Howrah Regional Office, WBSEDCL, 13 Netaji Subas Road, 1st floor, Howrah.**
- The *Engineer-in-Charge / Controlling Officer* shall mean the Engineer deployed by the company for the purpose of this contract.
- *Company's representative* shall mean any person or persons of WBSEDCL appointed by the Company and shall include the **contractor's executives, administrators, successor and permitted assignees.**
- The *Contractor* shall mean the Bidder who will be awarded with the contract by the Company and shall include the **contractor's executives, administrators, successor and permitted assignees.**
- The work *Site* shall mean the site of proposed work as detailed in the specification or any other place where the work is to be executed under the contract.
- The terms *Services* shall mean all works to be undertaken by the Contractor as laid down under the head „Scope of Work“ or elsewhere in the specification enclosed. When the words „*approved*“, „*subject to approval*“, „*as directed*“, „*accepted*“, „*permitted*“ etc. are used, the approval, judgment, direction etc. are understood to be a function of company.
- *Writing* shall indicate any manuscript, type written, printed or other statement reproduced in any visible form.
- *Date of Contract* shall mean the date on which the notification of award of contract / letter of award / telex award has been issued.
- *Zero Date* will be reckoned from the date of handing over of site.

10. Scope of work:

The contract comprises of **Supply, Laying, Erection & Installation as per schedule** of the work, as required including provision of all labor, material, construction plant, temporary work and everything whether of a temporary or permanent nature required for such construction, completion and maintenance so far as the necessity of providing the same is specified in or responsible to be inferred from the contract.

11. Manner of Execution of Contract:

The successful bidder has to submit acceptance of the LOI / Order within 7 (seven) days from the date of issue of the Letter of Intent / Order. The successful bidder shall be required to execute an Agreement (as per format enclosed as **Annexure-2**) at his expenses on a non judicial stamp paper of **Rs100/-** with the company with all related documents for satisfactory execution of the work. Agreement shall be signed on a date and time to be mutually agreed upon at Howrah Regional Office, WBSEDCL, 1st Floor, 13, N.S. Road, Mullick Fatak, Howrah-711101 and the same has to be signed by both parties within 30 (thirty) days from the date of the acceptance of the order. Power of attorney of the authorized representative of the contractor who will sign the contract on behalf of the contractor is to be submitted before signing of the agreement.

12. General Requirement:

- 12.1. **Pre-visit of work site:** Contractor to visit the site before submission of tender: The contractor shall inspect and examine the site and its surroundings and shall satisfy himself before submission of his tender as to nature of the site, the quantities and nature of work and the materials necessary for the completion of the works and the means to access to the site, the accommodation he may require and in general shall himself obtain all necessary information as to risks, contingencies and other circumstances which may influence and effect his tender.
- 12.2. **Cost of Bidding:** The Contractor shall bear all cost associated with the preparation and submission of their bid and WBSEDCL in no case shall be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.
- 12.3. **Correctness and sufficiency of rates quoted in the tender:** The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for works and the rates and prices stated in the schedule of the items. The rates and prices quoted shall cover all obligation of the tenderer under the contract and all materials and things necessary for the proper completion and maintenance of the works.
- 12.4. Contractor shall execute, complete and maintain the works as per direction of the **Controlling Officer /Engineer-in-Charge** of the works or his representatives.
- 12.5. **Contractor to submit program:** Within 14 (Fourteen) days from the date of issue of Letter of Intent/ Order the Contractor shall submit a program showing the order, procedure and method in which he proposes to carry out the work.
- 12.6. **Contractor's Staff at site:** The contractor shall provide at site authorized representative duly approved by the Controlling Officer (approval may be withdrawn for particular person, if necessary). The contractor and/or his authorized representative is to be constantly on the work and shall give whole time supervision of the same. Such authorized agent or representative shall receive (on behalf of the contractor) directions and instructions from the controlling Officer / Engineer or his representative.
- 12.7. **Removal of persons employed at site:** The Controlling Officer / Engineer shall be at liberty to ask the contractor to remove from the site any person, employed by the contractor in the execution of the works, who in the opinion of the Controlling Officer / Engineer misconducts himself or is incompetent or negligent in the proper performance of his duties and such persons shall not be again employed upon the works without the permission of the Controlling officer / Engineer.
- 12.8. **Setting out:** The Contractor shall be responsible for true and proper setting out of the works and for the correctness of the position, levels, dimensions and alignments of all parts of works. If at any time during the progress of the works any error shall appear or arise in the positions, levels, dimensions or alignments of any part of the work, the contractor on being asked to rectify by the Controlling Officer / Engineer, shall at his own expense rectify such error to the satisfaction of the Controlling Officer / Engineer.
- 12.9. **Protection of works:** The Contractor shall in connection with the works provide and maintain at his own cost all lights, guards, fencing and watching when and where necessary or required by the WBSEDCL or by any competent authority or statutory or other authority for the protection of the works or for the safety and convenience of the public or others.
- 12.10. **Care of works:** From the commencement to the completion of the works, the contractor shall take full responsibility for the care thereof and of all temporary works and in case of any damage, loss, or injury to works or to any part thereof or to any temporary works due to any cause whatsoever shall at his own cost repair and make good the same, so that at completion the works shall be in good order and conditions and in conformity in every respect with the requirements of the contract. The contractor shall take every practicable precaution not to damage or to cause injury to adjoining or other properties or to any persons. However even if any damage or injury occurs, the contractor shall be responsible in meeting the necessary claims and demands as may be required.
- 12.11. **Workmen's compensation for accident or injury to any workmen:** The WBSEDCL shall not be liable for damage or compensation payable as per provision of law in respect of consequence of any accident or injury to any workmen or other person in the employment of the contractor. Contractor shall have to pay all claims, demands, proceedings costs, charges and expenses whatsoever in respect thereof or in relation thereto. Insurance policy covering provision for workmen's compensation for all the workmen to be engaged by the contractor is to be made by him.

- 12.12. **Facilities for other contractors:** The contractor shall afford all reasonable facilities for any other contractor employed by WBSEDCL in the execution on or near the site of any work not included in the contract.
- 12.13. **Clearing site on completion:** On completion of the works the contractor shall clear away and remove from the site all constructional plant, surplus materials rubbish, and temporary works of every kind and leave the whole of the site and works clean and in a good and tidy condition to the satisfaction of Engineer-in-charge.

13. Labor License:

Contractor will have to obtain Labor License in respect of the above work as per Contract Labor (Regulation & Abolition) Act, 1970 as early as possible.

14. Compliance of Labor Laws:

The Contractor shall comply all statutory Labor Laws to protect the laborers engaged by them. In this connection the contractor will be required to execute an Indemnity Bond (as per specimen enclosed as Annexure – 1) after placement of Letter of Intent / Order.

15. Night and Holiday Work:

None of the permanent work related to contract shall be carried out during night or Sunday or on other holiday without permission in writing of the Engineer-in-charge.

16. Variation, Omission, Addition & Alteration:

The Contractor shall not modify the work except under direction in writing by the Company. The quantities provided in the Schedule of work are provisional only, which may vary up to any extent or may be deleted altogether. The quoted rate of each item shall remain firm till completion of contract. The company reserves the right to alter, amend and omit or otherwise vary the quantities as may be necessary but such variation will be limited to $\pm 25\%$ (plus or minus twenty five percent) of the contract price. Payment shall be made as per actual execution.

17. Supplementary Works:

Whenever supplementary works become unavoidable for completion of the work in all respect, the Contractor shall bring the matter to the notice of the Controlling Officer and submit their proposal. However the Controlling Officer shall have the right to advise the contractor to proceed with such item(s) of work. Rates for supplementary item shall be arrived at as given hereunder:

- 17.1. The rates of all supplementary items shall be decided on pro-rata basis from the existing items in the contract.
- 17.2. When Cl. No. 17.1 above shall not be applicable, the rate should be analyzed to the mutual acceptance of the present market rates of different elements involved in the item, against documentary evidence, with 5% overhead, contractor's profit as 10% (ten percent) and 1% (one percent) as Cess towards BOCWWC Act, 1996. In that case contractual rate of quotation will not be applicable.

Controlling Officer's decision regarding finalization of rate of non-scheduled item(s) shall be final and binding upon the Contractors.

18. Terms of Payment:

Progressive R/A bills, against the prayer of the contractor, for an amount of minimum 20% (twenty percent) of the ordered value or as deemed justified by the Controlling Officer shall be released against certification of the Controlling Officer. The bill shall be released within 45 (forty five) days of its submission. The final bill shall be released on completion of the work in all respect and fulfillment of all contractual obligations by the contractor.

18.01: Paying Authority :

The Asst. Manager (F&A) of Howrah Division-I office shall be the Paying Authority.

19. Completion of Contract:

All work under the contract must be completed by period of completion mentioned in NIT while portions of work as per program settled in consultation with the controlling officer shall be completed by the date stipulated in the said program. It is to be noted that time is the essence of the contract and any default on the part of the contractor to complete the work within the stipulated date / dates aforesaid or within the time as may be extended in writing by the Controlling Officer subject to payment of liquidated damages, the WBSEDCL shall have the right, without prejudice to any other clauses, to terminate contract forthwith and to take possession of the balance work / materials and have the same allotted to any other agency and the contractor shall be liable to compensate the loss that may be occasioned to the WBSEDCL on that account. Any letter in

writing by the Controlling Officer shall be treated as conclusive on behalf of the WBSEDCL.

20. Defective Materials:

If in the option of the Engineer-in-charge, any of the materials brought to the site for use are not of the quality or kind specified in the contract and / or are unfit for the works, he shall be at liberty to order the removal of the said materials and the contractor shall remove the same within **24 (twenty four)** hours after notice has been given to him and if he fails to remove them within the time the Engineer may cause them to be removed anywhere at the risk of the Contractor and any cost incurred in so doing shall be deducted from the dues to the contractor under the contract.

21. Drawings:

The works shall be carried out as per the instructions and to the satisfaction of the Engineer in accordance with the signed drawings, the specifications and schedule of quantities and also as per any further drawings which may be supplied, all instructions which may be given by the Engineer-in-Charge from time to time.

22. Material and Workmanship:

All the works shall be executed with the materials as specified and with best workmanship and / or in the best manner to the satisfaction of the Engineer-in-charge.

23. Extension of Time:

An extension of time without imposition of liquidity damage, may be granted for delay in execution of work provided there is no fault whatsoever on the part of the contractor. Such extension may only be granted on the basis of application to be submitted by the contractor who has to establish that the extension of time required by him is not due to his fault.

24. Liquidated Damage:

If the Contractor shall fail to complete the works within the time prescribed herein or extended time for completion, then the Contractor shall pay to the WBSEDCL a sum amounting to ½% (half percent) of the value of works as liquidated damages of such default for every week or part of a week which shall elapse between the time prescribed or extended time as the case may be and the date of completion of the works subject to a maximum of 10% (ten percent) of the total contract price.

The WBSEDCL may, without prejudice to any, other method of recovery deduct the amount of such damages from any money in their hand due or which may become due to the contractor. The payment for deduction of such damages shall not relieve the contractor from his obligation to complete the works or from any other his obligations and liabilities under the contract.

25. Company's Right to Terminated Contract:

- 25.1. If the contractor fails to start the work **within a month** from the date of issue of Letter of Intent / Work Order, the WBSEDCL shall have the right to cancel the Letter of Intent / Work Order with forfeiture of earnest money (Converted into initial security) without giving any notice to the contractor.
- 25.2. If the contractor neglects or fails to proceed with the work proportionate to the scheduled time of completion of the work or fails to complete the work within scheduled time for completion or within the extended time approved by the WBSEDCL, the WBSEDCL shall have right to terminate the Work Order / Letter of Intent after giving notice in writing to the contractor. If the contractor fails, after **14 (fourteen)** days of such notice, to proceed with the work in the matter notified, the WBSEDCL shall terminate the contract and call the contractor to take joint measurement along with the Engineer for the finished portion of work. If the contractor does not appear for a joint measurement, ex-parte measurement by the WBSEDCL will be taken as final. In that case the WBSEDCL shall take possession of the work site and engage other agency to complete the work. Extra cost, if incurred to get the unfinished work done through other agency, will be realized from him, from his pending bills and security money. In the contract terminated as above, the contractor shall have no claim for compensation against the WBSEDCL for any loss or deterioration of any materials that he may have collected or engaged or entered into an account of the work.

26. Quality of Work / Material and Mode of Measurement:

As regards specification of materials, execution of work and the mode of measurement relevant stipulation of WBSEDCL in this respect will be applicable. The contractor shall arrange and provide all necessary facilities along with necessary manpower for inspection, testing and measurement of work at his own cost.

27. Materials:

All major material for the work will be supplied by WBSEDCL from our nearest site stores which includes 33 KV 1X1000 Sqmm XPLE cable. In excess of 35 kms only the cost of transportation of excess kilometers beyond 35 kms is payable to you as per approved rate of the WBSEDCL prevailing at the time of actual transportation.

The WBSEDCL will have right to test any material(s) at any moment, if found necessary. In that case the contractor will be liable to take appropriate actions, which include the cost of testing and other incidentals. Authenticated document for

confirmation of quality of material, purchased by the contractor, shall have to be submitted on demand by the Engineer-in-charge.

However all materials recovered during cable replacement works should be returned to Bidhannagar-I Regional Store.

28. Safe custody of WBSEDCL materials and executed works:-

You shall be entirely responsible for all the materials issued to you for the works and the executed portion of the work till it is officially taken over by the WBSEDCL.

It is your responsibility to keep the policy alive throughout the desired period by timely and adequate payment of the premium. The insurance policy should cover towards materials and labour. If the amount of contract is modified subsequently the Insurance coverage should also be modified accordingly.

29. Deduction of Taxes and Cess for BOCWWC Act, 1996:

It is obligatory under the provision of Income Tax Act 1961 and West Bengal VAT Act 2003 (VAT on Work Contracts) to deduct tax to at source then the same will be deducted from the bills as applicable.

The Contractor is required to follow the Building and Other Construction Work Welfare Act, 1996. Registration of his establishment under section-7 of the building and the Construction Worker's (Regulation and

Condition of Service) Act, 1996 is to be made after the contract is awarded. 1% (one percent) Cess towards BOCWWC Act, 1996 will be deducted from its total amount of each bill. For these deductions certificate will be issued as per rules.

30. Force Majeure:

The contractor shall not be liable to pay any liquidated damage for delay / failure to perform the contract for reasons of force majeure such as act of God, act of the public enemy, acts of Governments, fire, flood, epidemics, quarantine restriction, strikes, freight embargos and provided that the contractor shall within 10 (ten) days from beginning of such delay notify the Company in writing of the cause of delay. The Company shall verify the fact and grant such extension as found to be justified without imposing liquidated damage. The department shall not be responsible or liable to pay any compensation for any interruption in work at the site due to strike, lockout, riot, earthquake, flood, cyclone or civil commotion or any other force of accident due to any reason beyond control. The department shall not be held responsible to or liable to pay for any interruption in your work at the site arising out of resistance from the local public due to any resistance towards work.

31. Sub-letting of Contract:

The Contractor shall not, without the written consent of the Company, assign or sublet his contract or any part thereof, other than of raw materials, or for any part of the work provided that any such consent shall not relieve the contractor from any obligation, duty or responsibility of the contract. In the event of sub-letting of contract or any part thereof is permitted, the fact that such permission has been accorded shall not establish any contractual relationship between the approved Sub-vendor and WBSEDCL of any of his liabilities and obligations under the contract.

32. Engineer's Decision:

Controlling Officer's decision is final in all respect of all matters which are left to the decision of the Controlling Officer including the granting of with-holding or certificates.

If in the opinion of Contractor, a decision made by Controlling Officer is not in accordance with the meaning and intent of the contract, the Contractor may file with the Controlling Officer within 7 (seven) days after receipt of the decision. Failure to file an objection within the allotted time will be considered as acceptance of the Controlling Officer's decision and the decision shall become final and binding.

33. Liability of Accidents and Damage:

The Contractor shall be responsible for the loss, damage or depreciation of the Company's materials while in their custody and until the same was taken over by the company.

Until the completed work is taken over by the Company, the Contractor shall also be liable for and shall indemnify the Company in respect of all injury to person or damage to property resulting from negligence of the Contractor or his workman or sub-contractor or for defective workmanship etc.

34. Language and Measurement:

All documents pertaining to the contract including specifications, schedule notices, correspondences, operating and maintenance instruction, drawing or any other writings be written shall be in English language. The metric system measurement shall be used exclusively in the contract.

35. Completion of Work:

Completion of work means completion of the work in totality and acceptance / takeover of the same by the company. Partial or phase wise completion will have no bearing towards consideration of guarantee / defect liability period.

36. Idle Labor / Machinery:

Whatever the reason may be, no claim for idle labor and machinery, additional establishment cost, hire and labor charges of tools & plants would be entertained by the Company, under any circumstances.

37. Safety Rules:

The bidder shall also provide necessary fencing and lights to protect the public from accident. Fire extinguishers shall be kept by the Contractor at the site of works where there is risk of fire hazard. Adequate washing facilities shall be provided near the place of work.

38. Settlement of Disputes:

All disputes concerning question of act arising under the contract shall be decided by the Owner / Company on receipt of written appeal by the Contractor. Any dispute or differences arising out in connection with this contract shall to the extent possible be settled amicably and where settlement cannot be reached then such disputes shall be subjected to settlement under the jurisdiction of Calcutta High Court.

When the work is done near any place where there is risk of drowning, all necessary equipments shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provisions shall be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

These safety provisions shall be brought to the notice of all concerned by displaying on a notice board at a prominent place at the work spot. The person responsible for the compliance of code shall be named by the bidder.

To ensure effective enforcement of the rules & regulations relating to safety precautions, the arrangement made by the bidder shall be open to inspection of the employer and WBSEDCL.

Notwithstanding the above clause there is nothing in those of exempt the bidder from the operation of any other Act or Rule in force in the Republic of India.

All storage, handling & use of flammable liquids shall be under the supervisions of qualified persons. First aid arrangements with the degree of hazard and numbers of workers employed shall be maintained in a readily accessible place throughout the whole of working hours.

39. Reporting of Accident:

All accidents, major or minor, must be reported immediately to WBSEDCL and the contractor will provide first aid to the injured person immediately. The injured person shall report to the First Aid station along with the „Injure on Work“ form as per appropriate Proforma, duly filled in quintuplicate and submit to the Medical Officer of the First Aid Station.

Serious Injuries: In case of serious injuries, the following procedure shall be adopted by the contractor.

- To provide first aid at his own First Aid Station.
- To take the injured person to the hospital along with the „Injured on Work“ form duly filled in.
- To report the accident to WBSEDCL.

Fatal Accident: Fatal accident must be reported immediately to WBSEDCL as well as to Police.

Penalty: Failure to observe the Safety Rules will make the contractor liable to penalty by way of suspension of work and termination of contract. Adequate arrangement for proper lighting & guarding shall be made at the work site.

40. Miscellaneous:

40.1. The entire work shall be inspected by WBSEDCL representative from time to time at site as necessary. The Contractor shall provide all facilities for such inspection free of cost. Notwithstanding any inspection of the site, WBSEDCL shall have the right to reject any work not conforming to the specification without being liable for any explanation or compensation. The authorized representative of WBSEDCL shall have the free access to the work site, contractor site office and store.

40.2. During the execution of the work, if any, problem arises which is not covered by the specifications, the contractor shall seek necessary clarification and instruction from WBSEDCL. Such instruction shall be binding on the contractor and shall be observed in full.

40.3. The Contractor shall make his own arrangement for the labor, construction equipment, tools and tackles and construction materials, construction water, office / labor accommodation, water supply, sanitation.

Electricity for construction purpose, if supplied by WBSEDCL, the charge shall be borne by the Contractor at the rate specified by WBSEDCL. The Contractor cannot claim any compensation for any failure in such supply caused due to any reason whatsoever in case of non-availability of electricity for construction purpose from WBSEDCL. The Contractor has to arrange the same at his own cost.

40.5. The Contractor shall strictly follow the construction safety rules, regulations and instructions issued from time to time. In absence of any particular reference the Contractor shall refer to the Indian Standard and also the State Government rules and regulations.

- 40.6. The contractor shall take all precautions during execution, especially while excavating underground works, such as cables, pipelines, drains etc. and provide all possible precautions to these works and incase they are damaged, rebuild / divert them at his own cost.
- 40.7. All guarantees and test certificates obtained by the contractor during the execution of the work shall be transferred to the WBSEDCL before issue of the final payment.
- 40.8. The Contractor shall provide all necessary storage at the site in specified areas for all materials such as timber, cement, lime and such other materials which are likely to deteriorate by the action of sun, wind, rain or other natural causes due to exposure in the open in such manner that all such material shall be duly protected from damage by weather or any other cause. All such stores shall be cleared after completion of work and the entire site shall be clean and free from debris. All material shall be stacked in such a manner as to facilitate rapid and easy checking of such materials.
- 40.9. All works are to be carried out with due regard to the convenience of the occupants of the premises or road users and with close coordination with other Contractors who may be working on that area. All arrangements / program of work must be adjusted accordingly. All precautions must be taken to guard against chances of injury or accident to the occupants, users & workers. The Contractor must see that all damages to any property, which in the opinion of the Controlling Officer are due to the work of Contractor, are promptly rectified as per direction and to his satisfaction. The construction of work must be done in such a way as not to dislocate or disturb any sewerage system and existing other structures.
- 40.10. It must be clearly understood that WBSEDCL is indemnified by the Contractor against payment of any compensation or award on account of any accident, injuries, and damages and if any such payment have to be made by WBSEDCL under order of appropriate authorities, the same shall be recovered from the Contractor.
- 40.11. Any services if affected by the work must be restored by the Contractor on emergency basis at his own cost.
- 40.12. After completion of work, the finishes shall be of high quality and approved standard.
- 40.13. No omission or ambiguities in the drawing or in the specifications will relieve the contractor from responsibility for material or completeness of the work.

Annexure - 1

SPECIMEN COPY OF INDEMNITY BOND
(TO BE EXECUTED ON Rs 100/- Non judicial Stamp Paper)

BY THE PRESENT INDEMNITY BOND EXCUTED by me / us on this Day of.....

I/We having Registered Office / residing at. (hereinafter called "OBLIGOR/OBLIGATOR" which expression shall mean and included my/our Successors legal representatives, assigns) do hereby binds myself / ourselves and also our Company/firm after having the power to bind so with the promise and undertaking in favor of the West Bengal State Electricity Distribution Company Limited. West Bengal State Electricity Transmission Company Limited, a government Company within the meaning of sec.617 of the Indian Company's act having registered office at BidyutBhavan, block-DJ, Sector-II, Salt Lake City, Kolkata-700091(hereinafter called as OBLIGEE, which expression shall mean and include it's legal representative administrators assigns. WHEREAS OBLIGOR/OBLIGATOR has /have been awarded to execute the job / works under letter no. Dated .issued by the OBLIGEE/OBLIGATOR after having observing necessary formalities the details of which is described in the schedule given hereunder as per letter mentioned herein-above and whereas the said job / works will be/likely to be done in places covered under Employees' State Insurance Act(ESI) and / or the Workmen Compensation Act(W.e. Act) and / or other laws relating to the Labour Management and Welfare. AND WHEREAS according to the condition of the contract the OBLIGOR / OBLIGATOR is under obligation to execute this Indemnity Bond before the commencement of actual execution and OBLIGOR/OBLIGATOR is aware that unless this Indemnity Bond is executed in accordance with the condition of contract before the actual execution in accordance with law the OBLIGEE shall have the power to deem that actual work has been started within the meaning of the contract before the execution of this Indemnity Bond NOW THIS INDENTUREWITNESSTHAT I / We the OBLIGOR/OBLIGATOR do hereby undertake.

1. THAT the OBLIGEE shall not be held responsible for any type of accident which may take place during the course of work undertaken by the OBLIGOR/OBLIGATOR.
2. THAT the OBLIGOR/OBLIGATOR will take adopt all safety norms in respect of each and every workmen labour personnel according to the rules or to the satisfaction of the OBLIGEE in all cases.
3. THAT the OBLIGOR/OBLIGATOR undertakes to engage only those labour worker or any other personnel whether skilled or unskilled or any other person whether in technical managerial or non-managerial or any other capacity in the area covered under Employees' State Insurance Act who has have insurance coverage within the meaning of Employees State Insurance Act and further undertakes NOT to engage any person in the area covered under the Employees State Insurance Act, who does / do has / have insurance coverage within the meaning of Employees State Insurance Act.
4. THAT the OBLIGEE further undertakes to engage only those labour worker, or any other personnel, whether skilled or unskilled, whether in technical, managerial or non-managerial or any other capacity in the area NOT covered under

Employees' State Insurance Act who has life insurance for the sum assured equivalent to the amount of Compensation under the Employees' Compensation Act in case of accidental death or inquiry and such insurance has been effected by the OBLIGEE.

5. THAT the OBLIGOR/OBLIGATOR undertakes / undertake to indemnify and keep harmless the OBLIGEE from all claims action proceedings and of risk damage danger to any person whether belonging to/ or not belonging to OBLIGOR/OBLIGATOR.
6. THAT the OBLIGOR / OBLIGATOR shall keep harmless the OBLIGEE from all claims compensation damages any proceedings in respect of any of its employee/workmen under the Workmen Compensation Act. Act or any other laws for the time being in force.

THAT if during the course of execution of work as stated in the letter mentioned hereinabove issued by the OBLIGEE, it is found that the OBLIGOR/OBLIGATOR has not complied with/ guidelines formalities within the meaning of Employees' State Insurance Act or Workmen Compensation Act or any other laws relating to the Labour Welfare for the time being in force, and also has not observed the safety norms in accordance with the law to the satisfaction of the OBLIGEE the OBLIGEE shall have the right to stop the execution of work/job and the period of such stoppage shall continue till adequate safety and other compliance mentioned hereinabove under the labour welfare legislation have been observed and such period of stoppage shall not be taken into account for the calculation of the total period of completion of work for which the OBLIGOR/OBLIGATOR is responsible to complete the work/job and it will be deemed that discontinuance was due to default of OBLIGOR/OBLIGATOR.

8. THAT ,if at any time due to exigency, the OBLIGOR/OBLIGATOR i.e. the West Bengal State Electricity Distribution Company Limited / West Bengal State Electricity Transmission Company Limited as the Principal Employer, becomes liable to pay any such compensation mentioned hereinabove, whether on failure of the obligee or for any other reason , the OBLIGOR/OBLIGATOR shall have the right to recover the said amount from any amount receivable by OBLIGEE or any bank guarantee deposited or anything payable whether in connection with this contract or other contract by the OBLIGOR/OBLIGATOR to the OBLIGEE.

THAT the OBLIGOR/OBLIGATOR is/are aware and accept that for the persistent or repeated violation of any condition mentioned in this Indemnity Bond, the OBLIGEE shall have right to terminate the contract of work issued by the OBLIGEE to OBLIGOR/ OBLIGATOR.

.....
Deponent

Witness:

1.....

2.....

Annexure - 2

PROFORMA OF AGREEMENT
(TO BE EXECUTED ON Rs 100/- Non judicial Stamp Paper)

ARTICLES OF AGREEMENT made thisDate ofin the year..... between West Bengal State Electricity Distribution Company Limited having its Head Office at VidyutBhavan, Block DJ. SectorII, Kolkata-700091 hereinafter referred to as the WBSEDCL (which expression shall unless excluded by or repugnant to the context be deemed to include its successors and assigns) of the ONE PART AND

.....hereinafter referred to as „CONTRACTOR“ (which expression shall unless excluded by or repugnant to the context be deemed to include his heirs, executors, administrators, representatives and assigns) of the OTHER PART.

WHERE AS WBSEDCL invited tenders vide Tender Notice No..... Date
(annexed hereto) for (Name of the work).....

AND WHERE AS in pursuance of such invitation for tenders the contractor submitted a tender vide no.
..... dt..... which was opened on

The tender offer shall be in the custody of the WBSEDCL at present.

AND WHERE AS AFTER consideration of the tender submitted by the contractor with clarification(s), if any,
WBSEDCL accepted the said tender submitted by the contractor and placed order no.....
dt..... (annexed hereto)

NOW THEREFORE, the WBSEDCL and the Contractor agree as follows :

The contractor agrees to undertake the work of as per Order No
..... dt..... referred to above.

The WBSEDCL agrees to pay the contractor as per the Order No.....dt..... referred to above.

Both the contractor and the WBSEDCL agree that for the purpose of jurisdiction of court in regard to any dispute arising out of this agreement, this agreement shall be deemed to have been executed within the jurisdiction of the original side of the High Court, Kolkata.

In witness whereof the parties have hereunder affixed their signature, on the day, the month and year written as above.

.....
Contractor

.....
WBSEDCL

Witness:

1.....

2.....

Witness:

1.....

2.....

Annexure - 3

PROFORMA OF SERVICE TAX DECLARATION

I / We hereby declare that,

Our firm is Small Service Provider in terms of *the Finance Act 1996* & we need to be registered with the *Superintendent of Central Excise* under Service Tax Permission.

.....
Sign / Seal of the FIRM

