

# BIDDING DOCUMENT

FOR

## IMPLEMENTATION OF SMART GRID INFRASTRUCTURE INCLUDING ENHANCING OF EXISTING NETWORK IN NDMC POWER DISTRIBUTION AREA

SUB HEAD:

Supplying & Laying underground 11 KV Cable of Size 400 Sq mm.and L.T cables of Various Sizes in NDMC area

**NIT NO: NDMC/SMART GRID/2017-18/03 (2<sup>nd</sup> Call)**



**वाष्कोस लिमिटेड**  
**WAPCOS LIMITED**

(भारत सरकार का उपक्रम)

जल संसाधन, नदी विकास व गंगा संरक्षण मंत्रालय

(A Government of India Undertaking)

Ministry of Water Resources, River Development & Ganga Rejuvenation



**New Delhi Municipal Council**

Palika Kendra, Sansad Marg, New Delhi

CONSULTANT: WAPCOS LIMITED

NEW DELHI MUNICIPAL COUNCIL

**ELECTRICITY DEPARTMENT  
NEW DELHI MUNICIPAL COUNCIL  
OFFICE OF THE EXECUTIVE ENGINEER  
New Delhi**

**e-Procurement Tender Notice**

**Tender ID No:** - \_\_\_\_\_

**Name of Work:** Implementation of Smart Grid Infrastructure Including enhancing of existing Network in NDMC Power Distribution Area

**Sub-Head:** Supplying & Laying underground 11 kV Cable of Size 400 sq.mm and L.T Cable of Various Sizes in NDMC area.

**Estimate cost:** - Rs.39,68,33,003/-

**Date of release of tender through e-procurement solution** 14/08/2017

**Date and time for Pre-bid meeting:** - 23/08/2017 at 11:00 A.M in the office of CE(E-II), Room no. 1706, 17<sup>th</sup> Floor, Palika Kendra, New Delhi - 110001

**Last date/time for receipt of tenders through e-procurement solution** 04/09/2017 upto 3:30PM

**Date/Time for opening of bid through e-procurement solution** 04/09/2017 at 4:00 PM

Further details can be seen at <https://govtprocurement.delhi.gov.in> or [www.ndmc.gov.in](http://www.ndmc.gov.in)

**Note:** - To participate in e-tender in NDMC registration with application services provider NIC is mandatory.

**Executive Engineer (E)  
IPDS Division**

**ELECTRICITY DEPARTMENT**  
**NEW DELHI MUNICIPAL COUNCIL**  
**OFFICE OF THE EXECUTIVE ENGINEER**  
**New Delhi**

**TENDER NOTICE**

The Item rate tenders e-procurement in three cover system on behalf of the NDMC are invited by the undersigned from original manufacturer of both type of cable i.e 1.1 KV voltage level and 11 KV or above voltage level /consortium of cable manufacturer and firms specializing in cable laying works for below mentioned work:

S. No.	Name of Work	Estimated Cost(Rs.)	Earnest Money (Rs.)	Date and Time		
				Date of release of tender through e-procurement solution	Last date/time for receipt of tenders through e-procurement	Date/time for opening of Bid through e-procurement
	Supplying & Laying underground 11 KV Cable of Size 400 sq. mm and L.T Cable of Various Sizes in NDMC area.	Rs.39,68,33,003/-	Rs.79,36,660/-	14/08/2017	04/09/2017 upto 3:30 PM	04/09/2017 at 4:00 PM

Tender document can be viewed/downloaded from NDMC website <http://govtprocurement.delhi.gov.in> and the bid documents shall be uploaded on the same site by 14/08/2017 upto 04/09/2017 upto 3:30 PM. Cover containing Earnest money as detailed above shall be submitted by 04/09/2017 upto 3:30 PM in the shape of demand Draft Fixed deposit receipt of a Scheduled Bank in favour of The Secretary, NDMC valid for a minimum period of 3 months from the date of opening the Tender. A part of earnest money is acceptable in the form of bank guarantee also. In such case, **minimum** 50% of earnest money or Rs.20 lacs, whichever is less, **shall** have to be deposited in shape prescribed above, and balance **may be deposited** in shape of Bank Guarantee of any scheduled bank **having validity for six months or more from the last date of receipt of bids** which is to be scanned and uploaded by the intending bidders. But the bid can only be submitted after deposition of EMD in favour of Secretary NDMC in the form prescribed in NIT (**Annexure – I**) and uploading the mandatory scanned documents such as receipt for deposition of EMD obtained from the office of any NDMC Executive Engineer or physically deposit the original EMD in the form prescribed before the schedule submission time of tender in the office of Executive Engineer concerned and other documents as specified. This envelope shall be opened first. In case of consortium lead bidder

shall deposit the EMD. **The Bid will be rejected without uploading the scanned copy of earnest money deposit receipt.**

Bids may also be submitted by consortium firm (having not more than two partners). Consortium partners shall nominate one as lead partner.

One partner must be manufacturer of both type of cable i.e 1.1 KV voltage level and 11 KV or above voltage level cable and other partner should have experience of laying of power cable of both type i.e. 1.1 KV voltage level and 11 KV or above voltage level).

All the terms and conditions of the bid document shall be applicable on the lead partner of consortium.

### **Eligibility Conditions**

The Tender documents through e-procurement solution, must accompany the self attested copies of following:

1. The bidder or in case of consortium, any partner should have valid Electrical Contractors License issued from designated authority failing which the bid shall be liable to rejected.
2. Bidder or in case of consortium, both partner should have Registration of GST and latest income tax return.
3. Should have satisfactorily completed the works as mentioned below during the last seven years ending last day of the month July 2017.

(a).In case of original manufacturer (i.e both type of cable including 1.1 KV voltage level and 11 KV or above voltage level), must have experience of one successfully completed turnkey project in Transmission/Distribution Sector costing not less than Rs 31,74,66,403/-essentially including supply of 11 KV cables or above voltage level. Supply of 1.1 kV cables will also be considered along with 11 kV or above voltage level cables.

In case of consortium one partner should be the original cable manufacturer of (i.e both type cable including 1.1 KV voltage level and 11 KV or above voltage level), must have experience of one successfully completed turnkey project in Transmission/ Distribution Sector costing not less than Rs. 19,26,45,440/- essentially including supply of 11 KV cables or above voltage level. Supply of 1.1 kV cables will also be considered along with 11 kV or above voltage level cables, and the other partner must have experience of one successfully completed turnkey project in Transmission/Distribution Sector costing not less than Rs 12,48,20,963/- essentially including laying of Underground Cable of 11 KV or above voltage level. Laying of Underground cables of 1.1 kV will also be considered along with underground cables of 11 kV or above voltage level.

OR

In case of original manufacturer (i.e both type of cable including 1.1 KV voltage level and 11 KV or above voltage level), must have experience of two successfully completed turnkey project in

Transmission/Distribution Sector each costing not less than Rs 23,80,99,802/- essentially including supply of 11 KV cables or above voltage level. Supply of 1.1 kV cables will also be considered along with 11 kV or above voltage level cables.

In case of consortium one partner should be the original cable manufacturer of (i.e both type cable including 1.1 KV voltage level and 11 KV or above voltage level), must have experience of two successfully completed turnkey project in Transmission/ Distribution Sector each costing not less than Rs. 14,44,84,080/- essentially including supply of 11 KV cables or above voltage level. Supply of 1.1 kV cables will also be considered along wiith 11 kV or above voltage level cables, and the other partner must have experience of two successfully completed turnkey project in Transmission/Distribution Sector each costing not less than Rs 9,36,15,722/- essentially including laying of Underground cables of 11 KV or above voltage level. Laying of underground cables of 1.1 kV will also be considered along with underground cables of 11 kV or above voltage level.

**OR**

In case of original manufacturer (i.e both type of cable including 1.1 KV voltage level and 11 KV or above voltage level), must have experience of three successfully completed turnkey project in Transmission/Distribution Sector each costing not less than Rs 15,87,33,201/-essentially including supply of 11 KV cables or above voltage level. Supply of 1.1 kV cables will also be considered along with 11 kV or above voltage level cables.

In case of consortium one partner should be the original cable manufacturer of (i.e both type cable including 1.1 KV voltage level and 11 KV or above voltage level), must have experience of three successfully completed turnkey project in Transmission/ Distribution Sector each costing not less than Rs. 9,63,22,720/- essentially including supply of 11 KV cables or above voltage level. Supply of 1.1 kV cables will also be considered along wiith 11 kV or above voltage level cables, and the other partner must have experience of three successfully completed turnkey project in Transmission/Distribution Sector each costing not less than Rs 6,24,10,481/- essentially including laying of underground cables of 11 KV or above voltage level. Laying underground cables of 1.1 kV will also be considered along with underground cables of 11 kV or above voltage level.

**AND**

1(b).In case of original manufacturer (i.e both type of cable including 1.1 KV voltage level and 11 KV or above voltage level), must have experience of one successfully completed turnkey project in Transmission/Distribution sector essentially including supply and laying of 66.15 km underground cable of 11 KV or above voltage level. Supplying & laying of 1.1 kV cables will also be considered along with underground cables of 11 kV or above voltage level, with central/state govt./central autonomous body/central public sector undertaking/PSU's.

In case of consortium one partner should be original cable manufacturer of (i.e both type cable including 1.1 KV voltage level and 11 KV or above voltage level), must have experience of one successfully completed turnkey project in Transmission/Distribution sector essentially for supply of 66.15km of 11 KV cables or above voltage level. Supply of 1.1 kV cables will also be considered along with 11 kV or above voltage level cables, with central/state govt./central autonomous body/central public sector undertaking/PSU's and the other partner must have experience of one successfully completed turnkey project in Transmission/Distribution sector essentially for laying of underground cables of 66.15km of 11 KV or above voltage level. Laying of underground cables of 1.1. kV will also be considered along with 11 kV or above voltage level cables, with central/state govt./central autonomous body/central public sector undertaking/PSU's.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to last date of Receipt of application for bids.

NOTE:

- (i) One completion certificate for two different work orders for same work shall also be considered as one turnkey project for qualifying the eligibility criteria
  - (ii) For Sr. No. 1(b), bidder experience in 33 KV voltage or above voltage level cable will also be considered for calculating length of cable. In this case, the length of cables of 33 KV voltage or above voltage level shall be considered twice of the length mentioned in the completion certificate.
4. Bidder should have had average annual financial turnover of **Rs.39,68,33,003/-** (100% of estimated Cost) on works during the last three years ending 31<sup>st</sup> March 2017. In case of consortium it is to meet on jointly basis however lead bidder should meet at least 60% of the requirement. (Scanned copy of Certificate from CA to be uploaded)
  5. Should have net worth of the each of the last three financial years should be positive. Net worth means the sum total of the paid up capital and free reserves (excluding reserves created out of revaluation) reduced by aggregate value of accumulated loses (including debit balance in profit and loss account for current year ) and intangible assets. In case of consortium, this condition shall meet individually by all members of consortium.

6. Should have a solvency of Rs **15,87,33,201/-** (40% of estimated cost) (Scanned copy of original solvency to be uploaded).In case of consortium this condition should be meet by lead bidder.
7. Bidder or in case of consortium, the lead partner shall submit in original duly signed and stamped pre-contract integrity pact as per Annexure A1 executed on non judicial stamp paper worth Rs. 100/-.
8. In case of consortium bid, Power of attorney for lead member of consortium, as per annexure –A2 executed on non judicial stamp paper worth Rs. 100/-.
9. In case of consortium bid, joint bidding agreement, as per annexure –A3 executed on non judicial stamp paper worth Rs. 100/-.
10. Documentary proof that cable manufacture is manufacturing both 1.1KV (LT Cables) & 11KV (HT Cable).
11. The bidder, in case of consortium, both partner shall submit in original duly signed and stamped undertaking as per Annexure A4, executed on non-judicial stamp paper worth Rs. 100/-.

(To be enclosed in bid document after annexure A4)

**NOTE:**

1. **Bidders who have been suspended from business dealings and/or debarred and/or charge sheeted by central agencies by Power utilities/State Utility/Central utility/Central PSU/State PSU/ National/International funding agencies in any assignment/project/contract at any stage including bidding stage for obtaining the assignment/project/contract within the last three years as on the date of submission of bid shall be disqualified.**
2. **For qualifying the eligibility criteria, the receipt of earnest money deposited and all the documents mentioned above should be uploaded on e-portal.**

**The hard copy of the uploaded documents, duly signed and stamped alongwith receipt of Earnest Money deposited, should be submitted by the bidder in the office of EE (IPDS) upto last date and time of submission of bid.**

**If there is difference found in the uploaded document and hard copy of documents, then the document uploaded on the E-portal only, shall be considered for qualifying the eligibility criteria**

**Executive Engineer (E)  
IPDS Division**

**ELECTRICITY DEPARTMENT  
NEW DELHI MUNICIPAL COUNCIL  
OFFICE OF THE EXECUTIVE ENGINEER  
New Delhi**

**NOTICE INVITING TENDER**

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**“Supplying & Laying Underground 11 kV Cable of Size 400 mm<sup>2</sup> and L.T Cable of Various Sizes in NDMC area”.**

Scanned copy of Earnest money shall be uploaded by 04/09/2017 upto 3:30 PM in the shape of demand Draft Fixed deposit receipt of a Scheduled Bank in favour of The Secretary, NDMC valid for a minimum period of 3 months from the date of opening the Tender. A part of earnest money is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money or Rs. 20 lacs, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee of any scheduled bank having validity for six months or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders. But the bid can only be submitted after deposition of EMD in favour of Secretary NDMC in the form prescribed in NIT and uploading the mandatory scanned documents such as receipt for deposition of EMD obtained from the office of any NDMC Executive Engineer or physically deposit the original EMD in the form prescribed before the schedule submission time of tender in the office of Executive Engineer concerned and other documents as specified. In case of consortium lead bidder shall deposit the EMD.

Estimated cost: **Rs.39,68,33,003/-**

**Eligibility Conditions**

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- a. The bidder or in case of consortium, any partner should have valid Electrical Contractors License issued from designated authority failing which the bid shall be liable to rejected.
- b. Bidder or in case of consortium, both partner should have Registration of GST and latest income tax return.
- c. Should have satisfactorily completed the works as mentioned below during the last seven years ending last day of the month July 2017.

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d. Bidder should have had average annual financial turnover of Rs. **39,68,33,003/-** (100% of estimated Cost) on works during the last three years ending 31<sup>st</sup> March 2017. In case of consortium it is to meet on jointly basis however lead bidder should meet at least 60% of the requirement. (Scanned copy of Certificate from CA to be uploaded)

e. Should have net worth of the each of the last three financial years should be

positive. Net worth means the sum total of the paid up capital and free reserves (excluding reserves created out of revaluation) reduced by aggregate value of accumulated losses (including debit balance in profit and loss account for current year ) and intangible assets. In case of consortium, this condition shall meet individually by all members of consortium.

- f. Should have a solvency of Rs **15,87,33,202/-**. (40% of estimated Cost).(Scanned copy of original solvency to be uploaded).In case of consortium this condition should be mate by lead bidder.
  - g. Bidder or in case of consortium, the lead partner shall submit in original duly signed and stamped pre-contract integrity pact as per Annexure A1 executed on non judicial stamp paper worth Rs. 100/-.
2. Registration of contractor and labour engaged under cess as per provision under 'under building and other construction worker act 1996.' If not applicable an affidavit on Non-judicial stamp paper regarding non-applicability under cess act 1996.
  3. Bidders shall have to furnish an affidavit as under:-
    - (i) I/ We undertake and confirm that eligible similar work (s) has have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I We shall be debarred for bidding in NDMC in future forever. Also if such a violation comes to the notice of Department before date of start of work, the Engineer-in-charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee. (Scanned copy to be uploaded at the time of submission of bid).
    - (ii) In case of consortium bid, Power of attorney for lead member of consortium, as per annexure –A2 executed on non judicial stamp paper worth Rs. 100/-.
    - (iii) In case of consortium bid, joint bidding agreement, as per annexure –A3 executed on non judicial stamp paper worth Rs. 100/-.
    - (iv) Documentary proof that cable manufacture is manufacturing both 1.1KV (LT Cables) & 11KV (HT Cable).
    - (v) The bidder, in case of consortium, both partner shall submit in original duly signed and stamped undertaking as per Annexure A4, executed on non-judicial stamp paper worth Rs. 100/-.

(To be enclosed in bid document after annexure A4)

**NOTE:**

1. **Bidders who have been suspended from business dealings and/or debarred and/or charge sheeted by central agencies by Power utilities/State Utility/Central utility/Central PSU/State PSU/ National/International funding agencies in any assignment/project/contract at any stage including bidding stage for obtaining the assignment/project/contract within the last three years as on the date of submission of bid shall be disqualified.**

2. For qualifying the eligibility criteria, the receipt of earnest money deposited and all the documents mentioned above should be uploaded on e-portal.

The hard copy of the uploaded documents, duly signed and stamped alongwith receipt of Earnest Money deposited, should be submitted by the bidder in the office of EE (IPDS) upto last date and time of submission of bid.

If there is difference found in the uploaded document and hard copy of documents, then the document uploaded on the E-portal only, shall be considered for qualifying the eligibility criteria

4. ~~The contractors Registered in other organization shall also have to get themselves registered in NDMC before they are paid first running bill.~~
5. The time allowed for carrying out the work will be 24 months reckoned from the 10th day of issue of award letter.
6. The site for the work is available/shall be made available.
7. Last date/time for receipt of tenders though e-procurement will be stopped by TIME at 15:30 Hrs. Tenders documents, consisting of plans, specifications, the schedule of quantities of the various clauses of work to be done and the set of terms & conditions of contract to be complied with by the contractor whose tender may be accepted and other necessary documents can be seen at <http://www.govtprocurement.delhi.gov.in> Payment of Earnest money of Rs.79,36,660/- shall be made in the shape of Demand Draft/Fixed Deposit Receipt/Banker's Cheque of a Scheduled Bank in favour of The Secretary, N.D.M.C. payable at Delhi/New Delhi valid for a minimum period of 6 months from the date of opening the tender.
8. The tenderer must produce copy of Registration under CGST/SGST before submission of first running bill.
9. Earnest money shall be placed in sealed envelope with the name of work and due date written on the envelope and addressed to the Executive Engineer must be deposited in the office of Executive Engineer concerned by TIME up to 03.30 PM. In case, the tenderer fails to deposit earnest money in prescribed form, the laid down eligibility criteria or, technical bid and/or financial bid shall not be opened through e-procurement solution. The tender of the contractor, who submits in complete tender documents or submits more than one tender for one work, shall not be considered at all.
10. The Contractor shall be required to deposit an amount equal to 5% of the tendered value of the work as performance guarantee in the form of an irrevocable bank guarantee bond of any scheduled bank or state Bank of in India in accordance with the form prescribed or in the form of fixed deposit receipt etc. as in the case of recovery of security deposit with in prescribed number of days of the issue of letter of acceptance. This period can be further extended by the Engineer –in –Charge up to a maximum period of prescribed number of days on written request of the contractor.
11. Tenderers are advised to inspect and examine the site and its surrounding and satisfy themselves before submitting their tenders so as to ensure that the work is completed in time without any unreasonable hindrance. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent

on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools and plants, water, electricity, access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specification of the work to be done and of condition and rates at which stores, tools and plants etc. will be issued to him by the NDMC and local condition and other factors having a bearing on the execution of the work.

12. The Accepting Authority (Executive Engineer or Superintending Engineering or Additional Chief Engineer or Chief Engineer or Engineer- in-Chief or Chairperson or New Delhi Municipal Council as the case may be) does not bind himself to accept the lowest or any other tender and reserves to himself the authority to reject any or all of the tenders received without the assignment of any reason. All tenders in which any of the prescribed conditions are not fulfilled or for any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.
13. Canvassing, whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractor who resort to canvassing will be liable to rejection.
14. The Accepting Authority reserves to himself the right of accepting the whole or any part of the tender and the tender shall be bound to perform the same at the rates quoted.
15. The Contractor shall not be permitted to tender for works if his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Engineer in Chief and junior Engineer (both inclusive) in New Delhi Municipal Council. He shall also intimate the names of person who are working with him in any capacity or are subsequently employed by him and who are near relatives so any junior Engineer/Officer of New Delhi Municipal Council. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors if however, the contractor is registered in any other organization, he shall be debarred from tendering in N.D.M.C.
16. NOTE: By the term near relative is meant wife, husband, parents and grand parents, children and grand children, brother and sister, uncles, aunts and cousins and their corresponding in laws.
17. No Engineer or other officer employed in New Delhi Municipal Council is allowed to work as a contractor or employee of a contractor for a period of two years after his retirement from New Delhi Municipal Council's service without the previous permission of New Delhi Municipal Council in writing. This contract is liable to be cancelled if either the contractor or any of his employee is found at any time to be such a person who had not obtained the permission of New Delhi Municipal Council as aforesaid before submission of the tender or engagement in the contractor's service, as the case may be.
18. Tenders shall remain open for acceptance for a period of 120 days from the date of opening of the tenders. If any tenderer withdraws his tender before the said period from issue of letter of acceptance, whichever is earlier or makes any modification in the

terms and condition of the tender which are not acceptable to the New Delhi Municipal Council, then New Delhi Municipal Council shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money absolutely besides black –listing of the tenderer or both. The decision of New Delhi Municipal Council in this behalf shall be final and binding on the tenderer.

19. The notice-inviting tender shall form a part of the contract document. The successful tenderer/contractor shall, as directed by the Executive Engineer, sign the necessary contract documents consisting of the notice inviting tender, all the documents including additional conditions, specification and drawings, if any forming the tender as issued at the time of invitation of tender and acceptance thereof with any correspondence leading thereto within the time specified in the letter communicating the acceptance of the tender. In case of delay, the earnest money may be forfeited and the tender cancelled or the contract enforced as per the terms of the tender and the invitation to tender and the tenderer shall thus be bound by the condition of contract even though the formal agreement has not been executed and signed within the specified time by the tenderer
20. Contract is liable to be terminated by the NDMC without payment of any compensation, if subsequent to the acceptance of tender the contractor is black-listed by, or enters into partnership or employs any black listed contractor of the NDMC or any other Deptt., or Govt. or its, undertakings.
21. The contractor, whose tender is accepted, will be required to furnish by way of security deposit for the fulfilment of his contract, an amount equal to 2.5% of the tendered value, of the work. The security deposit will be collected by deductions from the running bills of the contractor at the rate mentioned above and the earnest money, If deposited in case at the time of tenders, will be treated as a part of the security deposit. Fixed deposit receipt and bank guarantee bonds of a Scheduled Bank or State Bank of India will also be accepted for this purpose provided confirmatory advice is enclosed.
22. If the Head Quarter of the successful tenderer is at a place other than Delhi he shall have a duly authorized agent in Delhi from the date of commencement of the work until the work is virtually completed. Such agent shall be authorized to act on behalf of the successful tenderer Any notice under the contract shall be deemed to have been served on the successful tenderer, if served upon such agent or sent by registered letter at his address in Delhi. Such agent shall not be changed and shall not leave Delhi during the period of the contract without the prior approval of the Engineer –in –charge. If the Engineer –in –charge shall require the successful tenderer to carry out rectification of defects under the terms of the contract after the work has been completed, the successful tenderer shall have the same or another duly authorized agent in Delhi, while such rectification are being carried out.
23. The contractor shall submit list of works which are in hand (progress) in the following form:

Name of work	Agency getting the Work	Name & particulars of Division where work	Amount of work	Position of work in progress	Remarks

	executed	Being executed			
1	2	3	4	5	6

24. NIT approved in authority will determine the applicability of Clause 7A relating to labour licenses and registration of contractor with EPFO, ESIC, & BOCW, Welfare Board for the particular work. No running account bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC, & BOCW, Welfare Board, whatever applicable are submitted by the contractor to Engineer-in-charge.

25. NDMC has adopted Integrity Pact for all its contracts for Rs.50 Lacs or above. It is mandatory for the bidder/contractor to sign the IP. The bid of the bidder/contractor who do not sign the "IP" shall not be considered. Integrity pact is available at Annexure A1. In case of any grievance above the tender, the same may be sent to IEMs (Independent External monitors) (i) Sh. D.K. Sharma (e-mail: shharmadk@gmail.com) & (ii) Sh. V.K. Gupta (e-mail: vinod101951@gmail.com)/ Vigilance Department of NDMC with the name and address of the sender.

Signature of contractor  
Dated-----

**Executive Engineer (E)**  
**IPDS Division**

**For and on behalf of the**  
**New Delhi Municipal Council**

Earnest money deposit receipt

- Ref: 1) NIT No. \_\_\_\_\_  
2.) Tender ID No. \_\_\_\_\_  
3.) Estimated Cost put to tender Rs \_\_\_\_\_  
4.) EMD Rs. \_\_\_\_\_

Earnest money deposit for above reference tender in form of B.G for amounting Rs \_\_\_\_\_  
Vide no. \_\_\_\_\_ dated drawn on bank \_\_\_\_\_  
Branch \_\_\_\_\_ valid upto \_\_\_\_\_ and/or account payee  
DD/banker's Cheque/FDR for amounting to Rs \_\_\_\_\_ Branch \_\_\_\_\_  
Valid upto \_\_\_\_\_ in favour of Secretary NDMC, has been received from  
M/s \_\_\_\_\_ in the office of Executive Engineer,  
NDMC \_\_\_\_\_ Division on dated \_\_\_\_\_.

**Executive Engineer (EE)**  
\_\_\_\_\_ **Division**



## **GUIDELINES**

The tenderer should submit their offer in three separate parts/stages as per e-tendering system and as detailed below:-

### **Part No.-I: (Eligibility Conditions)**

For qualifying the eligibility criteria, the receipt of earnest money deposited and all the documents mentioned in NDMC:6 should be uploaded on e-portal.

The hard copy of the uploaded documents, duly signed and stamped along with receipt of Earnest Money deposited, should be submitted by the bidder in the office of EE (IPDS) upto last date and time of submission of bid.

If there is difference found in the uploaded document and hard copy of documents, then the document uploaded on the e-portal only, shall be considered for qualifying the eligibility criteria.

During bid evaluation, in case of erroneous documents submitted in original bid by the bidder in support of eligibility criteria, the employer at its discretion may, ask the further clarification, but new document not related with already submitted document in original bid, shall not be considered.

### **Part No.-II: (Technical Bid)**

This part should contain the duly signed and stamp copy of bid documents, downloaded from e-tender portal, schedule of deviation sheet, technical document e.g type test certificate, duly filled, signed and stamp GTP sheet etc., as mentioned in bid document.

If the submitted document along with bid not found upto the mark w.r.t to bid document, the department may seek further clarification and bidder shall be allowed to submit new document to qualify technical bid, but if bidder fail to meet the technical specifications, upto the mark as mentioned in bid document, even after submitted new document, the tender shall be liable to be rejected and part no. III will not be opened.

The bidder shall furnish following document / information in support of technical eligibility (Part No. –II technical bid).

1. Duly signed and stamped copy of bid document, downloaded from e-tender portal.
2. Duly filled schedule of deviation sheet.
3. Copy of BIS certificate of manufacturing 1.1 KV Grade LT Cable.
4. Copy of BIS certificate of manufacturing 11 KV Grade HT Cable.
5. Copy of ISO:9001 certification of cable manufacturing firm.
6. Copy of ISO:14001 certification of cable manufacturing firm.
7. Copy of ISO:9001 certification of HS type jointing and termination kit manufacturing firm.

8. Copy of ISO:14001 certification of HS type jointing and termination kit manufacturing firm.
9. Duly filled GTP for 11 KV grade HT XLPE insulated cable of size 400sq.mm 3 C  
[Performa of GTP (Annexure-B) is appears in the technical specification for 11 KV grade HT XLPE insulated cables ]
10. Type test reports, as mentioned in Bid Documents for 11 KV grade HT XLPE insulated cable of size 400sq.mm 3 C
11. Duly filled GTP for all rating of 1.1 KV grade cable mentioned in Bid Document [Performa of GTP (Annexure-C) is appears in the technical specification for 1.1 KV grade LT XLPE insulated cables for all size.]
12. Type test reports, as mentioned in Bid Documents of 1.1 KV grade LT XLPE insulated cables of sizes 400 sqmm. 3.5 C and 185 sqmm. 3.5 C.

**Part No.-III (PRICE BID):**

This part should contain only the rates of items and other amount both in figure and words. As indicated above, in case additional Condition/medication/alternation/suggestion are indicated in this Price Bid, the tender shall be treated as invalid.

The price bid of only eligible tenderers shall be opened on suitable date and time in the presence of various firms representatives. Intimation shall also be sent to the eligible tenderer in this regard well in advance.

However, the decision of Chief Engineer (Elect) regarding the eligibility for opening of Price Bids shall be final.

**Executive Engineer (E)**  
**IPDS**

## NEW DELHI MUNICIPAL COUNCIL

NDMC 7/8

### **General Rules & Directions**

1. All work proposed for execution by contract will be notified in a form of invitation to tender pasted in public places and signed by the officer inviting tender or by publication in News papers as the case may be.

This form will state the work to be carried out, as well as the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender, and the amount of the security deposit and Performance guarantees to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of Identification by the officer inviting tender shall also be open for inspection by the Contractor at the office of officer inviting tender during office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power-of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act, 1952.
3. Receipts for payment made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.

### **Applicable for Item Rate Tender only (NDMC- 8)**

4. Any person who submits a tender shall fill up the usual printed form, stating at what rate he is willing to undertake each item of the work. Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort, including conditional rebates, will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.

The rate(s) must be quoted in decimal coinage. Amounts must be quoted in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.

### **Applicable for Percentage Rate Tender only (NDMC- 7) DELETED**

- 4A. In case of Percentage Rate Tenders, tenderer shall fill up the usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in Schedule of Quantities at Schedule-A, he will be willing to execute the work. The tender submitted shall be treated as invalid if:-
  - (i) The contractor does not quote percentage above/ below on the total amount of

- tender or any section/sub head of the tender.
- (ii) The percentage above/below is not quoted in figures & words both on the total amount of tender or any section/sub head of the tender.
  - (iii) The percentage quoted above/below is different in figures & words on the total amount of tender or any section/sub head of the tender:

Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort including conditional rebates, will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.

- 4B. In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/below on estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.

In case any of such contractor refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50% of earnest money shall be forfeited.

If the revised tendered amount of two more contractors received in revised offer is again found to be equal, the lowest tender, among such contractors, shall be decided by draw of lots in the presence of SE of the circle, EE(s) in-charge of major & minor component(s) (also DDH in case Horticulture work is also included in the tender), NDMC of the circle & the lowest contractors those have quoted equal amount of their tenders.

In case all the lowest contractors those have quoted same tendered amount, refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each contractor.

Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.

- 5. The officer inviting tender or his duly authorized assistant will open tenders in the presence of any intending contractors who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest money shall thereupon be given to the contractor who shall thereupon for the purpose of identification sign copies of the specifications and other documents mentioned in Rule-I. In the event of a tender being rejected, the earnest money shall thereupon be returned to the contractor remitting the same, without any interest.
- 6. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.
- 7. The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgment or payment to the officer inviting tender

and the contractor shall be responsible for seeing that he procures a receipt signed by the officer inviting tender or a duly authorized Cashier.

8. The memorandum of work tendered for and the schedule of materials to be supplied by the department and their issue-rates, shall be filled and completed in the office of the officer inviting tender before the tender form is issued. If a form is issued to an intending tenderer without having been so filled in and incomplete, he shall request the officer to have this done before he completes and delivers his tender.
9. The tenderers shall sign a declaration under the officials Secret Act 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them. The unsuccessful tenderers shall return all the drawings given to them.
- 9A Use of correcting fluid, anywhere in tender document is not permitted. Such tender is liable for rejection.

**Applicable for Item Rate Tender only (NDMC- 8)**

10. In the case of Item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally, but the amount is not worked out correctly, the rates quoted by the contractor will unless otherwise proved be taken as correct and not the amount. In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the contractor has included the cost of this/these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.
- ~~10A. In case of Percentage Rate Tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy.~~
11. In the case of any tender where unit rate of any item/items appear unrealistic, such tender will be considered as unbalanced and in case the tenderer is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.

**Applicable for Item Rate Tender only (NDMC- 8)**

12. All rates shall be quoted on the tender form. The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs.' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. 'Rs. 2.15 P' and in case of words, the word, 'Rupees' should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should invariably be upto two decimal places. While quoting the rate in schedule of quantities, the word 'only' should be written closely

following the amount and it should not be written in the next line.

**Applicable for Percentage Rate Tender only (NDMC- 7)**

~~12A. In Percentage Rate Tender, the tenderer shall quote percentage below/above (in figures as well as in words) at which he will be willing to execute the work. He shall also work out the total amount of his offer and the same should be written in figures as well as in words in such a way that no interpolation is possible. In case of figures, the word 'Rs.' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. 'Rs. 2.15P' and in case of words, the word 'Rupees' should precede and the word 'Paisa' should be written at the end.~~

13. (i) The Contractor whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form.

ii) Security Deposit: 2.5% of tendered value. However, in case of contracts involving maintenance of building and services/other work after construction of same building and services/other work beyond defect liability period, 50% of Performance Guarantee shall be retained as Security Deposit. The same shall be returned year wise proportionately. The validity period of PG shall be extended accordingly. The Security deposit will be collected by deductions from the running bills of the contractor at the rates mentioned above and the earnest money deposited at the time of tenders, will be treated as a part of the Security Deposit. The Security amount will also be accepted in cash or in the shape of Government Securities. Fixed Deposit Receipt of a Scheduled Bank or State Bank of India will also be accepted for this purpose provided confirmatory advice is enclosed.

14. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-charge shall be communicated in writing to Engineer –in- Charge.

15. Single award letter /work order shall be issued for entire project.

The payment shall be made to the contractor according to aggregate amount of the item, filled at the time of Bid, after deducting statutory tax and income tax, applicable at the time of release of payment. NDMC will not entertain any claim by the contractor whatsoever in respect of the same in entire project except price adjustment (for cables derived according to IEEMA for which provision has been kept in the bid document and extra/additional/substitute item as per requirement of department.)

If at the time of invoicing, rerates of GST varies w.r.t. the rates of GST filled by the bidder at the time of submission of Bid, the same shall be payable/deductible from the running/final bill of the contractor

16. The contractor shall give a list of both gazetted and non-gazetted NDMC officers & employees related to him.
17. The tender for the work shall not be witnessed by a contractor or contractors who himself/ themselves has/have tendered or who may and has/have tendered for the same work. Failure to observe this condition would render, tenders of the contractors tendering, as well as witnessing the tender, liable to summary rejection.
18. The tender for composite work includes, in addition to building work, all other works such as sanitary and water supply installations drainage installation, electrical work, horticulture work, roads and paths etc. The tenderer apart from being a registered contractor (B&R) of appropriate class, must associate himself with agencies of appropriate class which are eligible to tender for sanitary and water supply drainage, electrical and horticulture works in the composite tender.
19. The contractor shall submit list of works which are in hand (progress) in the following form:-

Name of Work	Name and particulars of Division Where work is being	Value of Work	Position of works in Progress	Remarks

20. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Chief Engineer, Superintending Engineer/Executive Engineer may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.
21. **All Govt. Institute, Indian Institutes of Technology, National Institutes of Technology, Central and State Research Centers, Centrally and State funded laboratories stands approved.**

Contractor

Executive Engineer ( )

**NEW DELHI MUNICIPAL COUNCIL**

**Item Rate Tender & Contract for Works**

**(A) Tender for the work of: Supplying & Laying underground 11 kV Cable of Size 400 sq.mm and L.T Cable of Various Sizes in NDMC area**

- (i) To be submitted by **3:30 P.M hours** on \_\_\_\_\_ to the Executive Engineer IPDS Division, NDMC, New Delhi.
- (ii) To be opened in presence of tenderers who may be present at **4:00 PM hours** on \_\_\_\_\_ in the office of Executive Engineer IPDS Division, NDMC, New Delhi

Issued to .....

Signature of officer issuing the documents .....

Designation .....

Date of Issue.....

**TENDER**

I/We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the NDMC within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

**I / We agree to keep the tender open for 120 days from the date of opening of technical bids in case tenders are invited for specialized works on 3 envelope system**

A sum of **Rs.** \_\_\_\_\_/- is hereby forwarded in of scheduled bank/demand draft of a scheduled bank as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period. I/We agree that the said NDMC or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that NDMC or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further, I/We agree that in case of forfeiture of Earnest Money & Performance Guarantee as aforesaid. I/We shall be debarred for participation in the re-tendering process of the work.



**I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in NDMC in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer –in -charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.**

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

**Dated:**

**Witness:**

**Address:**

**Occupation:**

**Signature of Contractor**

**Postal Address**

**ELECTRICITY DEPARTMENT  
NEW DELHI MUNICIPAL COUNCIL  
OFFICE OF THE EXECUTIVE ENGINEER  
New Delhi**

**CONDITIONS OF CONTRACT FOR WORKS**

**Definitions:**

1. The "Contract" means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the New Delhi Municipal Council and the contractor, together with the documents referred to therein including these conditions, the specification designs, drawings and instructions issued from time to time by the Engineer-in-Charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.
2. In the contract, the following expression shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them :-
  - a. The Expression "works", or work shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the work by or virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
  - b. The "site" shall mean the land/ or other places on, into or through which work is to be executed under the contract or any adjacent land path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
  - c. The "contractor" shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representatives of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
  - d. The "N.D.M.C. or NDMC" mean the New Delhi Municipal Council.
  - e. The "Engineer-in-Charge" means the Executive Engineer who shall supervise and be in charge of the work.
  - f. The terms "Chief Engineer" includes Additional Chief Engineer also.
  - g. "Excepted Risk" are risk due to riots (other than those an account of contractor's employees), war (whether declared or not), invasion, act of foreign enemies, hostilities civil war, rebellion, revolution, insurrection, military or usurped power any act. Of Government, damages from aircraft, acts of God, such as earthquake, lightning and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the NDMC or causes solely due to use or occupation by NDMC of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to NDMC's faulty design of works.
  - h. "Market Rate" shall be the rate as decided by the Engineer-in-charge on the basis of the cost of materials and labours at the site where the work is to be executed plus fifteen percentages to cover all overheads and profits. "Tendered value" means the value of the entire work as stipulated in the letter of award.
  - i. Schedule(s) referred to in these conditions shall mean the relevant –schedule(s) annexed to the tender paper or Central Public works Department-Delhi Schedule of Rates with amendments thereto issued upto the date of receipt of the tender.

## **Scope and Performance**

3. Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.
4. Headings and marginal notes to the conditions of contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
5. The Contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.

## **Works to be carried out**

6. The work to be carried out under the contract shall, except as otherwise provided in these conditions, include all labours, materials, tools, plants, equipments and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the schedule of Quantities shall unless otherwise stated, be held to include wastage on material carriage and cartage, carrying and return of empties, hoisting, setting fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

## **Sufficiency of tender**

7. The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of this tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the works.

## **Discrepancies and adjustment of errors**

8. The several documents forming the contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale and special conditions in preference to general conditions.
- 8.1 In the case of discrepancy between the Schedule of Quantities, the Specifications and/or the Drawings, the following order of preference shall be observed:-
  - (i) Description of Schedule of Quantities.
  - (ii) Particular Specification and Special Condition, if any.
  - (iii) Drawings
  - (iv) C.P.W.D. Specifications
  - (v) Indian Standard Specification of B.I.S.
- 8.2 if there are varying or conflicting provisions made in any one document forming part of the contract, the Chief Engineer shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.

- 8.3 Any error in description, quantity or rate in Schedule of Quantities or any omission there from shall not vitiate the contract or release the contractor from the execution of the whole or any part of the works comprised therein according to drawing and specification or from any of his obligations under the contract.

### **Signing of Contract**

9. The successful tenderer/contractor shall, as directed by the Executive Engineer, within the time specified in the letter communicating the acceptance of the tender, sign the necessary contract documents consisting of the notice inviting tender, all the documents including drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
10. Issue of stipulated materials and T&P shall be issued only after necessary contract documents are signed by the contractor.

## CLAUSES OF CONTRACT

### Clause 1.

#### Performance Guarantee

- i. The contractor shall submit an irrevocable PERFORMANCE GURANTEE of 5% (Five Percent) of the tendered amount in addition to other deposit mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provision in the contract) within 15days of issue of letter of acceptance. This period can be further extended by the Engineer-in-Charge up to a maximum period on 7days on written request of the contractor stating the reason for delays in procuring the Bank Guarantee, to the satisfaction of the Engineer-in-Charge. This guarantee shall be in the form of Deposit-at-Call receipt, Banker's Cheque/Demand Draft pay order of any schedule bank or Fixed Deposit Receipts or guarantee Bonds of any scheduled Bank or the State Bank of India in accordance with the form annexed hereto. In case a fixed deposit receipt of any Bank is furnished by the contractor to he NDMC as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the NDMC to make good the deficit.  
The performance guarantee shall be initially valid upto the stipulated date of completion plus 60 days is for one year beyond that in case the time for completion of work gets enlarged, the contractor shall get the validity of performance guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest.
- ii. The Engineer-in-Charge shall not make a claim under the performance guarantee except for amounts to which the NDMC is entitled under the contract (notwithstanding and/or without prejudice to any other provisions in the contract agreement) in the event of.
  - a. Failure by the contractor to extend the validity of the performance Guarantee as described therein above, in which event the Engineer-in-Charge may claim the full amount of the performance guarantee.
  - b. Failure by the contractor to pay the NDMC any amount due, either as agreed by the contractor or determined under any of the clauses/Conditions of the agreement, within 30days of the service of notice to this effect by Engineer-in-Charge.
  - c. In the event of the contract being determined or rescinded under provision of any of the clause/condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the NDMC.

#### Form of Performance Security/Bank Guarantee Bond.

In consideration of the New Delhi Municipal Council (hereinafter called N.D.M.C) having offered to accept the terms and conditions of proposed agreement between.....and.....(hereinafter called "the said contractor(s)").....forthework.....  
...(hereinafter called "the said agreement") having agreed to production of a irrevocable Bank Guarantee for Rs.....(Rupees.....only) as a security/guarantee from the contractor (s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

1. We.....(herein after referred to as “the Bank” hereby undertake (indicate the name of the Bank) to pay to the NDMC an amount not exceeding Rs..... (Rupees.....only) on demand by the NDMC.
2. We.....do hereby undertake to pay the amounts due and payable under this ,(indicate the name of the Bank Guarantee without any demure, merely on a demand from the NDMC ‘s stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor (s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....(Rupees.....only).
3. We, the said bank further undertake to pay to the NDMC: any money so demanded notwithstanding any dispute or disputes raised by the contractor (s) in any suite or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and un-equivocate. The payment so made by us under this bond shall be a valid discharge of our liability for payment there-under and the contractor (s) shall have no claim against us for making such payment.
4. We.....further agree that the guarantee herein contained shall remain in full force(indicate the name of Bank)and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the NDMC under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-charge on behalf of the NDMC certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor (s) and accordingly discharges this guarantee.
5. We.....further agree with the NDMC that the NDMC shall have (indicate the name of Banks) the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor (s) from time to time or to postpone or any time or from time to time any of the powers exercisable by the NDMC against the said contractor (s) and to forbear or enforce any of the terms and conditions relations to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor (s) or for any forbearance, act of omission on the part of the NDMC or any indulgence by the NDMC to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.
6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
7. We..... lastly undertake not to revoke this guarantee except with the (indicate the name of the Bank) previous consent of the NDMC in writing.
8. This guarantee shall be valid upto .....unless extended on demand by the NDMC notwithstanding anything mentioned above our liability against this guarantee is restricted to Rs..... (Rs.....only)and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of

this guarantee all our liabilities under this guarantee shall stand discharged.

Dated the.....day  
of.....for.....(indicate the name of the  
Bank.

## **Clause 1. A**

### **Recovery of security deposit**

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit the NDMC at the time of making any payment to him for work under the contract to deduct a sum at the rate of 5% of the gross amount of each running bill till the sum along with sum already deposited as earnest money, will amount to security deposit of 5% of the tendered value of the work. Such deductions will be made and held by the NDMC by way of security deposit unless he/they has/have deposited the amount of security at the rate mentioned above in cash or in the form of Fixed Deposit Receipt of any scheduled Bank or the State Bank of India. In case a fixed deposit receipt of any bank is furnished by the contractor to the NDMC as part of the security deposit and the bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the NDMC to make good the deficit.

All compensations or the other sums of money payable by the contractor under the term of this contract may be deducted from his security deposit, or from any sums which may be due to or may become due to the contract by the NDMC on any account whatsoever and in the event of his security deposit being reduced by reason of any such deduction, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by schedule banks.

The security deposit shall be collected from the running bill of the contract or at the rate mentioned above and the earnest money if deposited in cash at the time of tender's bill be treated a part of the security deposit.

## **Clause 2**

### **Compensation for delay**

If the contract fails to maintain the required progress in terms of clause 5 or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the NDMC on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the Chief Engineer (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every completed day/month (as applicable) that the progress remains below that specified in Clause 5 or that the work remains incomplete.

This will also apply to items or group of items for which a separate period of completion has been specified. Compensation for delay of work @ 1.5% per day to be computed on per day basis. Provided always that the total amount of compensation for delay to be paid

under this condition shall not exceed 10% of the Tendered Value of work or to the Tendered Value of the item or group of items of work which a separate period of completion is originally given.

The amount of compensation may be adjusted or set-off against any sum payable to the contractor under this or any other contract with the NDMC. In case, the contractor does not achieve a particular milestone mentioned in schedule –A or the rescheduled milestone (s) in terms of clause 5.4, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of extension of time. Withholding of this amount on failure to achieve a milestone, shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone (s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such with held amount.

#### **Clause 2A(Deleted)** **Incentive for early completion**

In case , the contractor completes the work ahead of schedule completion time a bonus @ 1% (One Percent) of the tendered value per month computed on per day basis, shall be payable to the contractor subject to maximum limit of 5% (Five Percent) of the tendered value. The amount of bonus, if payable, shall be paid along with final bill after completion of work provided always that provision of clause 2A shall be applicable only when so provided in '**schedule F**'

#### **Clause 3** **When contract can be determined**

Subject to other provisions contained in this clause, the Engineer-in-Charge may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/ or any other provisions of this contract or otherwise and whether the date of completion has or has not elapsed by notice in writing absolutely determine the contract in any of the following cases:-

- (i) If the contractor having been given by the Engineer-in-charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un workman like manner shall omit to comply with the requirements of such notice for a period of seven days thereafter.
- (ii) If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer-in-Charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer-in-Charge.



- (iii) If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date (s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-Charge.
- (iv) If the contractor persistently neglects to carry out his obligations under the contract and/or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7days after a notice in writing is given to him in that behalf by the Engineer-in-Charge.
- (v) If the contractor shall offer or give or agreed to give to any person in NDMC service or to any other person on his behalf any gift or consideration of any kind as and inducement or reward for doing or for bearing to do or for having done or for born to do any act in relation to the obtaining or execution of this or any other contract for NDMC.
- (vi) If the contractors shall enter into a contract with NDMC in connection with which commission has been paid or agreed paid by him or to his knowledge, unless the particulars of any such commission and terms of payments thereof have been previously disclosed in writing to the Engineer in Charge.
- (vii) If the contractor shall contract a contract with NDMC as a result of wrong tendering or other non - bonafide method of competitive tendering.
- (viii) If the contractor being an individual, if a firm or any partner thereof shall at any time be adjudged insolvent or have a receiving order or order of administration of his estate made against him or shall take any proceeding for liquidation for composition (Other than A voluntary liquidation for the purpose of amalgamation for reconstruction) under any Insolvency Act for the time being enforce or make any conveyance or assignment of his effect or composition or arrangements for the benefits of his creditors or purport so to do if any application be made under in any solvency act for the time being in force for the sequestration of his estate or if a trust did be executed by him for benefit of his creditors.
- (ix) If the contractor being a company shall pass resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of the creditor shall be appointed or if circumstance shall arise which entitled the court or the creditor to appoint a receiver or a manager for which entitled a court to make a winding up order.
- (x) The contractor shall suffer and execution being levied on his goods and allow it to be continued for a period of 21 days.
- (xi) If the contractor assigns, transfers, sublets (Engagement of labour on piece work basis or of labour with material not to be incorporated in work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer in Charge. When the contractor made him self liable for action under any of the cases aforesaid, the engineer in charge on behalf of NDMC shall have powers.
  - a. To determine the contract as aforesaid (of which termination or rescission notice in writing to the contract under the hand of the Engineer-in-Charge shall be conclusive

evidence). Upon such determination or rescission, the earnest money, security deposit already recovered and performance guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the NDMC.

- b. After giving notice to the contractor to measure up the work of the contract and to take such whole, or the balance or part thereof as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor whose contract is determined or rescinded as above, shall not be allowed to participate in the tendering process for the balance work.

In the event of above courses being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provisions aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work there- of not actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified

### **Clause 3A**

In case, the work cannot be started due to reasons not within the control of the contractors within 1/8th of the stipulated time for completion of work, either party may close the contract. In such eventuality, the Earnest Money deposit and Performance Guarantee of the contractors shall be refunded, but no payment on account of interest, loss of profit or damages etc shall be payable at all.

### **Clause 4**

#### **Contractor liable to pay compensation even if action not taken under clause 3**

If any case in which any of the power conferred upon the Engineer-in-Charge by Clause 3 hereof, shall have become exercisable and the same are not be exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such power shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Engineer-in-charge putting in force all or any of the powers vested in him under the preceding clause he may. If he so desires, after giving a notice in writing to the contractor, take possession of (or at the sole direction of the Engineer-in-charge which shall be final and binding on the contractor) use as on hire (the amount of the hire money being also in the final determination of the Engineer-in-charge) all or any tools plant, materials and stores, in or upon the works, or the site thereof belonging to the contractor, or procured by the contractor and intended to be used for the execution of the work of any part thereof, paying or allowing for the same in account at the contract rates, or in the case of these not being applicable, at current market rates to be certified by the Engineer-in-charge whose certificate thereof shall be final and binding on the contractor, otherwise the Engineer-in-charge by notice in writing may order the contractor or his clerk of the works, foremen or other authorized agent to remove such tool plant materials or store from the premises (within a time to bespecified in such notice) and in the event of the contractor failing to comply with any such requisition, the Engineer-in-charge may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor and

at his risk in all respect and the certificate of the Engineer-in-charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.

## Clause 5

### Time and extension for delay

The time allowed for execution of the works as entered in the tender or the extended time in accordance with these conditions shall be the essence of the contract. The execution of the works shall commence from the 10<sup>th</sup> days or such time period as mentioned in letter of award after the date on which the Engineer-in-charge issues written orders to commence the work or from the date of handing over of the site whichever is later. If the contractor commits default in commencing the execution of the work as aforesaid, the NDMC shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money and performance guarantee absolutely.

- 5.1 As soon as possible after the contract is concluded, the contractor shall submit a time and progress Chart for each milestone and get it approved by the Engineer-in-charge. The chart shall be prepared in direct relation to the time stated in the contract document for completion of item of the works. It shall indicate the forecast of the dates of commencement and completion of various trades or sections of the work and may be amended as necessary by agreement between the Engineer-in-charge and the contractor within the limitations of time imposed in the contract documents, and further to ensure good progress during the execution of the works, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per milestone schedule 'A' given in Schedule 'A'.
- 5.2 If the work(s) be delayed by:-
- i. Force majeure, or
  - ii. Abnormally bad weather, or
  - iii. Serious loss or damage by fire, or
  - iv. civil commotion, local commotion of workmen, strike or lockout, affecting any of the trade employed on the worker
  - v. delay on the part of other contractors or tradesmen engaged by Engineer-in-charge in executing work not forming part of the contract, or
  - vi. non-availability of stores, which are the responsibility of the NDMC to supply, or
  - vii. non-availability or break down of tools and plant to be supplied or supplied by the NDMC or
  - viii. any other cause which, in the absolute discretion of the competent authority on behalf of the NDMC is beyond the contractor's control.

Then upon the happening of any such event causing delay, the contractor shall immediately give notice thereof in writing to the Engineer-in-charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-charge to proceed with the work.

- 5.3 Request for rescheduling of milestone and extension of time, to be eligible for consideration, shall be made by the contractor in writing within fourteen days of the

happening of the event, causing delay on the prescribed from. The contractor may also if, practicable, indicate in such a request the period for which extension is desired.

- 5.4 In any such case, the competent authority on behalf of the NDMC may give a fair and reasonable extension of time and reschedule the milestones for completion of work. Such extension shall be communicated to the contractor by the Engineer-in-charge in writing within 3 months of the date of receipt of such request. Non application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-in-charge and this shall be binding on the contractor.

## **Clause 6**

### **Measurement of work done**

Engineer-in-charge shall except as otherwise provided, ascertain and determine, by measurement, the value in accordance with the contract, of the work done.

All measurements of all items having financial value shall be entered in measurement Book and/or level field book so that a complete record is obtained of all works performed under the contract.

All measurements and levels shall be taken jointly by the Engineer-in-charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurement shall be signed and dated by the Engineer-in-charge and the contractor or their representative in token of their acceptance. If the contractor objects to any of the measurement recorded, a note shall be made to that effect with reason and signed by both the parties.

If or any reason the contractor or his authorized representative is not available and the work of recording measurement is suspended by the Engineer-in-charge or his representative, the Engineer-in-charge shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurement after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, the such measurement recorded in his absence by the Engineer-in-Charge or his representative shall be deemed to be accepted by the contractor.

The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer in- charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer-in-charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract of specifications. The Engineer-in-charge or his authorized representative shall at all times have access to the works and to all workshop and places where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works and the contractor shall afford every facility and every assistance in obtaining the right to such access.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of Measurements issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed.

The contractor shall give not less than seven day's notice to the Engineer-in-charge or his authorized representative incharge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-charge or his authorized representative incharge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer-in-charge's consent being obtained in writing the same shall be uncovered at the contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-charge or his authorized representative may cause either themselves or through another officer of the NDMC to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

## **CLAUSE 6 A**

### **Computerized Measurement Book**

Engineer in Charge shall, accept all otherwise provided, ascertain and determine by measurement the value of work done in accordance with the contract. All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of computerized measurement book having pages of a size as per the format of the department so that complete record is obtain of all the items of works performed under the contract.

All such measurement and level recorded by the contractors or his authorized representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer in Charge or his authorized representative as per interval or program fixed in consultation with Engineer in Charge or his authorized representative. After the necessary corrections made by Engineer in Charge, the measurement sheets shall be return to the contractor for incorporating the corrections and or resubmission to the Engineer in Charge for the dated signature by the Engineer in Charge and the contractor or their representatives in token of their acceptance.

Whenever bill is due for payment, the contractor would initially submit draft computerized measurement sheets and these measurement would be got checked / test checked from the Engineer in Charge and /or his authorized representative. The contractor will, therefore, incorporate such changes as may be done during these checks / test checks in his draft computerized measurements, and submit to the department a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer in Charge and / or his authorized representative would thereafter check this MB, and record the necessary certificate for their check / test check.

The final, fair, computerized measurement book given by the contractor, duly bound, with its pages machines numbered, should be 100% correct, and no cutting or writing in the measurements would thereafter be allowed. If at all any error is noticed, the contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the department. Thereafter, the MB shall be taken in the divisional office records, and allotted a number as per the Register of computerized MB's. This should be done before the corresponding bill is submitted to the Division office for payment. The contractor shall submit two spare copies of such computerized MB's for the purpose of reference and record by the various officers of the department.

The contractor shall also submit to the department separately his computerized abstract of cost and the bill based on these measurements, duly bound, and its pages machine numbered along with two spare copies of the bill. Therefore, this bill will be process by the division office and allotted a number as per the computerized record in the same way as the done for the measurement book meant for measurements.

The contractors shall, without extra charge, provides all assistance with every appliance, labour and other things necessary for checking of measurement of levels by the Engineer in Charge or his representative.

Except where any general or detailed description of the work expressly show to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications note-with-standing any provision in the relevant standard method of measurement or any general or local custom. In the case of items which are not covered by specification, measurement shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no standard is available than a mutually agreed method shall be followed.

The contractor shall give not less than seven day's notice to the Engineer in Charge or his authorized representative in charge of the work before covering up or otherwise placing beyond the reach of checking and / or test checking the measurement of any work in order that the same may be checked and / or test check and correct dimension thereof to be taken before the same is covered up or placed beyond the reach of checking and / or test checking measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer in Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven day's inspect the work, and if any work shall be covered up or placed beyond the reach of checking and / or of test checking measurement without such notice having being given or the Engineer in Charge's consent being obtained in writing the same shall be uncovered at the contractor's expense, or in default thereof no payment or allowance shall be made for such work or the material with which the same was executed.

Engineer in Charge or his authorized representative may cause either themselves or through another officers of the department to check the measurement recorded by the contractor and all provision stipulated here in above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that checking and / or test checking the measurements of any item of work in the measurement book and / or it payment in the interim, on account of final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any or measurement of defects noticed till completion of the defects liability period.

## **CLAUSE 7**

### **Payment on intermediate certificate to be regarded as advances**

No payment shall be made for work, estimated to cost. Rs. twenty thousand or less till after the whole of the work shall have been completed and certificate of completion given. For works estimated to cost over rupees twenty thousand, the interim or running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format of the NDMC in triplicate on or before the date of every month fixed for the same by the Engineer-in-charge. The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment/adjustment of advances for material collected, if any, since the last such payment is less than half the average monthly value of contract, in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved. Engineer-in-charge shall arrange to have the bill verified by taking or causing to be taken, where necessary the requisite measurements of the work. In the event of the failure of the contractor to submit the bills, Engineer-in-charge shall prepare or cause to be prepared such bills in which event no claims whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer-in-charge certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Engineer-in-charge. The amount admissible shall be paid by

15th working day after of presentation of the bill by the contractor to the Engineer-in-charge together with the account of the material issued by the NDMC, or dismantled materials.

All such interim payments shall be regarded as payments by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in-charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer-in-charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

Pending consideration of extension of date of completion, interim payments shall continue to be made as herein provided, without prejudice to the right of the NDMC to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.

The Engineer-in-charge in his sole discretion on the basis of a certificate from the Assistant Engineer to the effect that the work has been completed upto the level in quest make interim advance payments without detailed measurements for work done (other than foundations and items to be covered under finishing items ) upto lintel level (including sunshade etc.) and slab level, for each floor working out at 75% of the assessed value. The advance payments so allowed shall be adjusted in the subsequent interim bill by taking detailed measurements thereof.

#### **CLAUSE 7 “A”**

No running account bill shall be paid for the work till the applicable labour license, registration with EPFO, ESIC and BOCW welfare board, whatever applicable are submitted by the contractor to Engineer in-charge.

Whether Clause 7 “A” shall be applicable Yes/~~No~~:

#### **CLAUSE 8**

##### **Completion Certificate and Completion Plans**

Within ten days of the completion of the work, the contractor shall give notice of such completion of the Engineer-in-charge and within thirty days of the receipt of such notice the Engineer-in-charge shall inspect the work and if there is no defect in the work shall furnish the contractor with a final certificate of completion, otherwise provisional certificate of physical completion indicating defects (a) to be rectified by the contract or and/or (b) for which payment will be made at reduced rates, as decided by SE(E)/ACE shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed all defects of works and also removed all scaffolding, surplus materials, rubbish and all tents and sanitary arrangements required for his work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor and cleaned off the dirt from all wood work, doors, windows, walls, floors or other parts of the building, in, upon, or about which the work has been executed of which he may have had passion for the purpose of the execution thereof, and not until the work shall have been measured by the Engineer-in-charge. If the contractor shall fail to comply with the requirements of this clause as to removal defects and scaffolding, surplus materials and rubbish and all tents and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer-in-charge may at the expense of the contractor remove defects scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid. The decision of SE(E)/ Additional Chief Engineer shall be final and binding to contractor.

#### **CLAUSE 8 A**

##### **Contractor to keep site clean**

When the annual repairs and maintenance of work are carried out, the splashes and droppings from white washing, colour washing, painting etc., on walls, floors, windows, etc. shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done without waiting for the actual completion of all the other items of work in the



contract. In case the contractor fails to comply with the requirements of this clause, the Engineer-in-charge shall have the right to get this work done at the cost of the contractor either departmentally or through any other agency. Before taking such action the Engineer-in-charge shall give ten days notice in writing to the contractor.

## **CLAUSE 8 B**

### **Completion Plans to be submitted by the contractor**

The contractor shall submit completion plan as required vide General Specifications for Electrical works (Part-I internal) and (Part-II External) as applicable within thirty days of the completion of the work.

In case, the contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum equivalent to 2.5% of the value of the work may be fixed by the Superintending Engineer/ Additional Chief Engineer/concerned and in this respect the decision of the Superintending Engineer/Additional Chief Engineer shall be final and binding on the contractor.

## **CLAUSE 9**

### **Payment of final bill**

The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-charge, will, as far as possible be made within the period specified herein under, the period reckoned from the date of receipt of the bill by the Engineer-in-charge complete with account of materials issued by the NDMC and dismantled materials.

- i. If the tendered value of work is upto Rs. 15 Lacs : 3 months.
- ii. If the tendered value of work exceeds Rs. 15 Lacs : 6 months

## **CLAUSE 9A**

### **Payment of contractor's bill to Banks**

Payment due to the contractor may, if so desired by him, be made to his bank instead of direct to him provided that the contractor furnishes to the Engineer-in-charge (1) an authorization in the form of a legally valid document such as a power-of-attorney conferring authority on the bank to receive payments and (2) his own acceptance of the correctness of the amount made out as being due to him by the NDMC or his signature on the bill or other claim preferred against the NDMC before settlement by the Engineer-in-Charge of the account or claim by payment to the bank. While the receipt given by such bank shall constitute a full and sufficient discharge for the payment, to the contractor shall wherever possible present his bills duly receipted and discharged through his bankers. Nothing herein contained shall operate to create in favour of the bank any rights or equities vis-à-vis the NDMC.

## **CLAUSE 10**

### **Materials supplied by NDMC**

Materials which the NDMC will supply are shown in Schedule of Materials given herein after which stipulated quantity, place of issue and issue rate to be charged in respect thereof. The contractor shall be bound to procure them from the Engineer-in-charge.

As soon as the work is awarded, the contractor shall finalize the programme for the completion of work as per clause 5 of this contract and shall give his estimates of materials required on the basis of drawings/or schedule of quantities of the work. The contractor shall give in writing his requirement to the Engineer-in-charge which shall be issued to him keeping in view the progress of work as assessed by the Engineer-in-charge, in accordance with the agreed phased programme of work indicating monthly requirements of various materials. The contractor shall place his indent in writing for issue of such materials at least 7 days in advance of his requirement.

Such materials shall be supplied for the purpose of the contract only and the value of the materials so supplied at the rates specified in the aforesaid schedule shall be set off or deducted, as and when materials are consumed in items of work (including normal wastage) for which payment is being made to the contractor, from any sum then due or which may thereafter become due to the contractor under the contract or otherwise or from the security deposit. At the time of submission of bills, the contractor shall certify that balance of materials supplied is available at site in original good condition.

Stipulated materials shall be issued for use at site on work, for all the items where such materials are required. For factory made products like pre-cast cement tiles, pre-cast hollow concrete blocks, pre-cast foam concrete blocks, pre-cast RCC pipes, MS grills, railings, etc. stipulated materials shall not be issued.

The contractor shall submit along with every running bill (on account or interim bill) material wise reconciliation statement supported by complete calculations reconciling total issue, total consumption and certified balance (diameter/section-wise in the case of steel) and resulting variations and reasons therefore. Engineer-in-charge shall (whole decision shall be final and binding on the contractor) be within his rights to follow the procedure of recovery in clause 42 at any stage of the work if reconciliation is not found to be satisfactory.

The contractor shall bear the cost of getting the material issued, loading, transporting to site, unloading, storing under cover as required, cutting, assembling and joining the several parts together as necessary. Notwithstanding anything to the contrary contained in any other clause of the contract, all stores/materials so supplied to the contractor or procured with the assistance of the NDMC shall remain the absolute property of the NDMC and the contractor shall be the trustee of the stores/materials, and the said stores/materials shall not be removed/disposed off from the site of the work on any account and shall be at all times open to inspection by the Engineer-in-charge or his authorized representative. Any such stores/materials remaining unused shall be returned to the Engineer-in-charge in as good a condition in which they were originally supplied at a place directed by him, at place of issue or any other place specified by him as he shall require, but in case it is decided not to take back the stores/materials, the contractor shall have no claim for compensation on any account of such stores/materials so supplied to him as aforesaid and not used by him or for any wastage in or damage to such stores/materials.

On being required to return the stores/materials, the contractor shall hand over the stores/materials on being paid or credited such price as the Engineer-in-charge shall determine, having due regard to the condition of the stores/materials. The price allowed for credit to the contractor, however, shall be at the prevailing market rate not exceeding the amount charged to him, excluding the element of storage charges. The decision of the Engineer-in-charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to account for contravention of the terms of the licenses or permit and/or for criminal breach of trust be liable to the NDMC for all advantages of profits resulting or which in the usual course would have resulted to him by reason of such breach. Provided that the contractor shall in no case be entitled to any compensation or damages on account of any delay in supply or non-supply thereof all or any such materials and stores. Provided further that the contractor shall be bound to execute the entire work if the materials are supplied by the NDMC within the original scheduled time for completion of the work plus 50% thereof or scheduled time plus 6 months whichever is more if the time of completion of work exceeds 12 months but if a part of the materials only has been supplied within the aforesaid period then the contractor shall be bound to do so much of the work as may be possible with the materials and stores supplied in the aforesaid period. For the completion of the rest of the work, the contractor shall be entitled to such extension of time as may be determined by the competent authority on behalf of the NDMC whose decision in this regard shall be final and binding on the contractor.

The contractor shall see that only the required quantities of materials are got issued. Any such material remaining unused and in perfectly good/original condition at the time of completion or determination of the contract shall be returned to the Engineer-in-charge at the stores from which it was issued or at a place directed by him by a notice in writing. The contractor shall not be entitled for loading, transporting, unloading and stacking of such unused material except for the extra lead, if any involved, beyond the original place of issue.

## **CLAUSE 10 A**

### **Materials to be provided by the contractor**

The contractor shall, at his own expense, provide all materials, required for the work other than those which are stipulated to be supplied by the NDMC.

The contractor shall, at his own expense and without delay, supply to the Engineer-in-charge samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the contractor shall be in conformity with the specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer-in-charge furnish proof, to the satisfaction of the Engineer-in-charge that the materials so comply. The Engineer-in-charge shall within thirty days of supply of samples or within such further period as he may require intimate to the contractor in writing whether samples are approved by him or not. If samples are not approved, the contractor shall forthwith arrange to supply to the Engineer-in-charge for his approval fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with specifications, approval of the Engineer-in-charge shall be issued after the test results are received.

The contractor shall at his risk and cost submit the samples of materials to be tested or analyzed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or analysis have been made and materials finally accepted by the Engineer-in-charge. The contractor shall not be eligible for any claim or compensation either

arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials. The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer in-charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer-in-charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer-in-charge or his authorized representative shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works and the contractor shall afford every facility and every assistance in obtaining the right to such access.

Wherever testing charges, for getting the samples of materials/goods/articles tested in the testing laboratory approved by the Engineer-in-charge, are required to be borne by the NDMC as per specifications and conditions of contract, the testing charges shall be initially paid by the contractor and the amount so paid shall be reimbursed to the contractor in the running bills on receipt of test reports and submission of original cash receipt issued by such laboratory. But in case of failure of sample the testing charges shall be borne by the contractor.

The Engineer-in-charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default the Engineer-in-charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-charge shall also have full powers to require other proper materials to be substituted therefore and in case of default the Engineer-in-charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the contractor.

#### **Clause 10. B (Deleted)**

#### **Secured Advanced on non-perishable materials**

- (i) The contractor, on signing as indenture in the form to be specified by the Engineer-in-charge shall be entitled to be paid during the progress of the execution of the work upto 75% of the assessed value of any materials which are in the opinion of the Engineer-in-charge, non perishable, non-fragile and non combustible and are in accordance with the contract and which have been brought on the site in connection therewith and are adequately stored and/or protected against damage by weather or other causes of but which have not at the time of advance been incorporated in the work. When material on account of which an advance has been made under this sub-clause are incorporated in the work, the amount of such advance shall be recovered/deducted from the next payment made under any of this clause of clauses of this contract.

Such secure advance shall also be payable on other items of perishable nature, fragile and combustible with the approval of the Engineer-in-charge provided the contract provides a comprehensive insurance cover for the full cost of such materials. The decision of the Engineer-in-charge shall be final and binding on the contract in this matter. No secured advance shall, however be paid on high-risk materials such as ordinary glass sand petrol, diesel etc.

## **Mobilization Advance**

- (ii) Mobilization advance not exceeding 10% of tendered value may be given, if requested by the contractor in writing within one month of the order to commence the work. Such advance shall be in two or more instalments to be determined by the Engineer-in-charge at his absolute discretion. The first instalment of such advance shall be released by the Engineer-in-charge to the contractor on a request made by the contractor to the Engineer-in-charge in this behalf. The second and subsequent instalments shall be released by the Engineer-in-charge only after the contractor furnishes a proof of the satisfactory utilization of the earlier instalment to the entire satisfaction of the Engineer-in-charge. Before any instalment of advance is released, the contractor shall execute a Bank Guarantee Bond from scheduled bank for the amount of advance and valid for the contract period. This shall be kept renewed from time to time to cover the balance amount and likely period of complete recovery, together with interest.

Provided always that provision of Clause 10B (ii) shall be applicable only when so provided in 'Schedule F'.

## **Plant & Machinery and shuttering material Advance**

- (iii) An advance for plant, machinery and shuttering material required for the work and brought to site by the contractor may be given if requested by the contractor in writing within one month of bringing such plant and machinery to site. Such advance shall be given on such plant and machinery, which in the opinion of the Engineer-in-Charge will add to the expeditious execution of work and improve the quality of work. The amount of advance shall be restricted to 5% of tendered value, in the case of new plant and equipment to be purchased for the work, the advance shall be restricted to 90% of the price of such new plant and equipment paid by the contractor for which the contractor shall produce evidence satisfactory to the Engineer-in-Charge. In the case of second hand and used plant and equipment, the amount of such advance shall be limited to 50% of the depreciated value of plant and equipment as may be decided by the Engineer-in-Charge. The contractor shall if so required by the Engineer-in-Charge, submit the statement of value of such old plant and equipment duly approved by a Registered Valuer recognized by the Central Board of Direct Taxes under the Income Tax Act, 1961. No. such advance shall be paid on any plant and equipment of perishable nature and on any plant and equipment of a value less than Rs. 50,000/-, 75% of such amount of advance shall be paid after the plant & equipment is brought to site and balance 25% on successfully commissioning the same.

Leasing of equipment shall be considered at par with purchase of equipment and shall be covered by tripartite agreement with the following

1. Leasing company which gives certificate of agreeing of lease equipment to the contractor
2. Engineer-in-Charge
3. Contractor

This advance shall further be subject to the condition that such plant and equipment (a) are considered by the Engineer-in-Charge to be necessary for the works; (b) and are in and are maintained in working order; (c) hypothecated to the NDMC as specified by the Engineer-in-Charge before the payment of advance is released. The contractor shall not be permitted to remove from site such hypothecated plant and equipment without the prior

written permission of the Engineer-in-Charge. The contractor shall be responsible for maintaining such plant and equipment in good working order during the entire period of hypothecation failing which such advance shall be entirely recovered in lump sum. For this purpose steel scaffolding and form work shall be treated as plant and equipment.

The contractor shall insure the plant and machinery, for which mobilization advance is sought and given, for a sum sufficient to provide for their replacement at site. Any amount not recovered from the insurer will be borne by the contractor.

#### **Interest and recovery**

- (iv) The Mobilization advance and plant and machinery advance and in (ii) & (iii) above bear simple interest at the rate of 10 per cent per annum and shall be calculated from the date of payment to the date of recovery, both days inclusive, on the outstanding amount of advance. Recovery of such sums advanced shall be made by deduction from the contractor's bill commencing after first ten percent of gross value of the work is executed and paid and pro-rata percentage basis to the gross value of the work billed beyond 10% in such a way that the entire advance is recovered by the time eighty percent of the gross value of the contract is executed and paid, together with interest due on the entire outstanding amount upto the date of recovery of the instalment.
- (v) If the circumstances are considered reasonable by the Engineer-in-Charge the period mentioned in (ii) and (iii) for request by the contractor in writing for grant of mobilization advance and plant and equipment advance may be extended in the discretion of the Engineer-in-Charge.
- (vi) The said bank Guarantee for advances shall initially be made for the full amount and valid for the contract period and be kept renewed from time to time to cover the balance amount and likely period to complete recovery together with interest

#### **CLAUSE 10 C (Deleted)**

##### **Payment on account of increase in Prices/Wages due to Statutory Order(s)**

If after submission of the tender, the price of any material incorporated in the work (excluding the materials covered under 10CA and not being a material supplied from the NDMC stores in accordance with Clause 10 hereof) and/or wages of labour increases as a direct result of the coming in- to force of any fresh law, or statutory rule or order (but not due to any charge in CGST/SGST) beyond the prices/wages prevailing at the time of the last stipulated date of receipt of tenders including extensions, if any, for the work during contract period including the justified period extended under the provisions of Clause 5 of the contract without any action under Clause 2, the amount of the contract shall accordingly be varied and provided further that any such increase shall be limited to the price/wages prevailing at the time of stipulated date of completion or as prevailing for the period under consideration, whichever is less.

If after submission of the tender, the price of any material incorporated in the work (excluding the materials covered under Clause 10CA and not being a material supplied from the NDMC stores in accordance with Clause 10 thereof) and/or wages of labour as prevailing at the time of last stipulated date of receipt of tender including extensions, if any, is decreased as a

direct result of the coming into force of any fresh law, or statutory rule or order (but not due to any changes in CGST/SGST)

Government shall in respect of materials incorporated in the works (excluding the materials covered under Clause 10CA and not being materials supplied from the NDMC stores in accordance with Clause 10 hereof) and/or labour engaged on the execution of the work after the date of coming into force of such law, statutory rule or order be entitled to deduct from the dues of the contractor, such amount as shall be equivalent to the difference between the prices of the material and/or wages as prevailed at the time of the last stipulated date for receipt of tenders including extension if any for the work and the prices of materials and/or wages of labour on the coming in- to force of such law, statutory rule or order. This will be applicable for the contract period including the justified period extended under the provisions of Clause 5 of the contract without any action under Clause 2.

Engineer-in-Charge may call books of account and other relevant documents from the contractor to satisfy himself about reasonability of increase in prices of materials and wages.

The contractor shall within a reasonable time of his becoming aware of any alteration in the price of any such material(s) and/or wages of labour give notice thereof to the Engineer-in-Charge stating that the same is given pursuant to this condition together with all information relating thereof which he may be in position to supply.

For this purpose, the labour component of the work executed during any period shall be the percentage as specified in Schedule F, of the value of work done during that period and increase/decrease in labour shall be considered on the minimum daily wages in Rupees of any unskilled adult male mazdoor, fixed under any law, statutory rule or order.

#### **CLAUSE 10 CA (Deleted)**

##### **Payment due to Variation in prices of materials after receipt of tender.**

If after submission of the tender, the price of material specified in schedule "F" increases / decreases beyond the price(s) prevailing at the time of the last stipulated date of receipt of tenders (Including extensions, if any) for the work, then the amount of the contract shall accordingly be varied and provided further that any such variations shall be effected for stipulated period of contract including the justified period extended under the provision of clause 5 of the contract without any action under clause 2.

However for work done during the justified period extended as above, it will be limited to prevailing at the time of stipulated date of completion or as prevailing for the period under consideration, whichever is less.

The increase/decrease in prices of cement, steel reinforcement and structural steel shall be determined by the Prices Indices issued by the Chief Engineer (Civil), NDMC. For other items provided in Schedule 'F', this shall be determined by the All India Wholesale Price Indices of materials as published by Economic Advisor to Government of India, Ministry of Commerce and Industry and base price for cement, steel reinforcement and structural steel as issued under the authority of Chief Engineer (Civil), NDMC as indicated in Schedule 'F' as valid on the last stipulated date of receipt of tender, including extensions if any and for the period under consideration, in case, price index of a particular material is not issued by the

Ministry of Commerce and Industry, then the price index of nearest similar material as indicated in Schedule 'F' shall be followed.

The amount of the contract shall accordingly be varied for all such materials and will be worked out as per the formula given below for individual material :-

$$V = P \times Q \times \frac{CI - C_{10}}{C_{10}}$$

Where,

V= Variation in material cost, i.e., increase or decrease in the amount in rupees to be paid or recovered.

P= Base Price of material as issued under the authority of Chief Engineer (Civil), NDMC as indicated in Schedule 'F' valid at the time of the last stipulated date of receipt of tender including extensions, if any,

Q= Quantity of material brought at site for bonafide use in the works since previous bill.

C<sub>10</sub>= Price Index for cement, steel reinforcement bars and structural steel as issued by the Chief Engineer (Civil), NDMC as valid on the last stipulated date of receipt of tenders including extensions, if any. For other items, if any, provided in Schedule 'F', All India Wholesale Price Index for the material as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce as valid on the last stipulated date of receipt of tenders including extensions, if any.

CI = Price Index for cement, steel reinforcement bars and structural steel as issued under the authority of Chief Engineer (Civil), NDMC for period under consideration. For other items, if any, provided in Schedule 'F', All India Wholesale Price Index for the material for period under consideration as published by Economic Advisor to Government of India, Ministry of Industry and Commerce.

Note :-

- (i) In respect of the justified period extended under the provisions of clause 5 of the contract without any action under clause 5 of the contract without any action under clause 2, the index prevailing at the time of stipulated date of completion or the prevailing at the time of stipulated date of completion or the prevailing index of the period under consideration, whichever is less, shall be considered.  
Provided always that provisions of the preceding Clause 10C shall not be applicable in respect of materials covered in this Clause.
- (ii) If during progress of work or at the time of completion of work, it is noticed that any material brought at site is in excess of requirement, then amount of escalation if paid earlier on such excess quantity of material shall be recovered on the basis of cost indices as applied at the time of payment of escalation or as prevailing at the time of effecting recovery, whichever is higher.



## CLAUSE 10 CC (Deleted)

### Payment due to increase/decrease Prices/Wages after receipt of tender for works.

If the prices of materials (not being materials supplied or services rendered at fixed prices by the Department in accordance with Clauses 10 or 34 thereof) and/or wages of labour required for execution of the work increase, the contractor shall be compensated for such increase as per provisions detailed below and the amount of the contract shall accordingly be varied, subject to the condition that such compensation for escalation in prices and wages shall be available only for the work done during the stipulated period of the contract including the justified period extended under the provisions of clause 5 of the contract without any action under clause 2. However, for the work done during the justified period extended as above, the compensation as detailed below will be limited to prices/wages prevailing at the time of stipulated date of completion or as prevailing for the period under consideration, whichever is less. No such compensation shall be payable for a work for which the stipulated period for completion is equal to or less than the time as specified in Schedule 'F'. Such compensation for escalation in the price of materials and labour, when due, shall be worked out based on the following provisions:-

- (i) The base data for working out such escalation shall be the last stipulated date of receipt of tenders including extension, if any,
- (ii) The cost of work on which the escalation will be payable shall be reckoned as below:
  - Gross value of work done upto this quarter : (A)
  - a) Gross value of work done upto the last quarter :(B)
  - b) Gross value of work done since previous quarter (A-B): (C)
  - c) Full assessed value of Secured Advance fresh paid in this Quarter : (D)
  - d) Full assessed value of Secured Advance recovered in this quarter : (E)
  - e) Full assessed value of Secured Advance for which escalation is Payable in this quarter (D-E) :(F)
  - f) Advance payment made during this quarter : (G)
  - g) Advance payment recovered during this quarter : (H)
  - h) Advance payment for which escalation is payable in this quarter (G-H) : ( I )
  - i) Extra item paid as per Clause 12 based on prevailing market rates during this quarter : (J)  
Then  $Q=C+F+I-J$   
 $R=0.85M$
  - j) Less cost of material supplied by the Department as per Clause 10 and recovered during the quarter: (K)
  - k) Less cost of services rendered at fixed charges as per Clause 34 and recovered during the quarter: (L)
  - l) Less cost of Cement – Quantity of cement brought at site for bonafide use in the work during the quarter X Base Price of Cement : (M)
  - m) Less cost of reinforcement bars -  
Quantity of reinforcement bars brought at site for bonafide use in the work during the quarter X Base Price of reinforcement bars : (N)

- n) Less cost of structural steel – Quantity of structural steel brought at site for bonafide use in the work during the quarter X Base Price of Structural Steel : (O)
- o) Less cost of other material covered under clause 10 CA – Quantity of such Material/Materials brought at site for bonafide use in the work during the quarter covered under clause 10CA X Base Price of such Material/Materials : (P)

Cost of work for which escalation is application:

$$W = R - (K + L) - (M + N + O + P)$$

(iii) Components for materials (except cement, reinforcement bars, structural steel or others materials covered under Clause 10 CA), Labour P.O.L. etc. shall be pre-determined for every work and incorporated in the conditions of contract attached to the tender papers included in Schedule 'E'. The decision of the Engineer-in-Charge in working out such percentage shall be binding on the contractors.

(iv) The compensation for escalation for other materials (excluding cement, reinforcement bars, structural steel or other materials covered under clause 10 CA) and P.O.L shall be worked as per the formula given below:-

(a) Deleted

(b) Deleted

(c) Adjustment for civil component

(except cement, Structural steel, reinforcement bars and other materials covered under clause 10CA) / electrical component of construction 'Materials'

$$V_m = W \times \frac{X_m}{100} \times \frac{MI - M_{lo}}{M_{lo}}$$

$V_m$  = Variation in material cost i.e. increase or decrease in the amount in rupees to be paid or recovered.

$W$  = Cost of work done worked out as indicated in sub-para (ii) of Clause 10CC.

$X_m$  = Component of 'materials' (except cement, Structural steel, reinforcement bars and other materials covered under clause 10CA) expressed as percent of the total value of work.

$MI$  = All India Wholesale Price Index for civil component/electrical component\* of construction material as worked out on the basis of All India Wholesale Price Index for individual Commodities/Group items for the period under consideration as published by Economic Advisor to Govt. of India, Ministry of Industry & Commerce and applying weightages to the individual Commodities/ Group Items. (In respect of the justified period extended under the provisions of clause 5 of the contract without any action under clause 2, the index prevailing at the time of stipulated date of completion or the prevailing index of the period under consideration, which ever is less shall be considered).

$M_{lo}$  = All India Wholesale Price Index for civil component/electrical component \* of construction material as worked out on the basis of All India Wholesale Price Index for individual Commodities/Group items valid on the last stipulated date of receipt of tender, including extension, if any, as published by the Economic Advisor to Govt. of India, Ministry of Industry & Commerce and applying weightages to the individual Commodities/Group items.

\*Note : relevant component only will be applicable.

- (d) Adjustment for component of 'POL'.....tender including extension, if any.
- (v) The following principles..... falling within that period.
- (vi) The component for escalation .....receipt of tender including extension, if any.
- (vii) The following principles.....on the labour component.
- (viii) In the event of the price .....binding on the contractor.
- (ix) Provided always that-:
  - (a) Where provisions of clause 10CC are applicable, provisions of clause 10C will not be applicable but provisions of clause 10CA will be applicable.
  - (b) Where provisions of clause 10CC are not applicable, provisions of clause 10C and 10CA will become applicable.

## **CLAUSE 10 D**

### **Dismantled Material-NDMC Property**

The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work, etc. as NDMC property and such materials shall be disposed off to the best advantage of the NDMC according to the instructions in writing issued by the Engineer-in-charge.

## **CLAUSE 11**

### **Work to be executed in accordance with Specifications, Drawings, Orders etc.**

The contractor shall execute the whole and every part of the work in the most substantial and workman like manner both as regards materials and otherwise in every respect in strict accordance with Central Public Works Department Specifications 1996 Vol. I to VI with amendments thereto, issued upto the date of receipt of the tender. The contractor shall also conform exactly, fully and faithfully to the designs, drawings and instructions in writing in respect of the work signed by the Engineer-in-charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings, and instructions as are not included in the standard specifications of Central Public Works Department or in any Bureau of Indian Standard or any other published standard or code or, Schedule of Rates or any other printed publication referred to elsewhere in the contract.

The contractor shall comply with the provisions of the contract and with care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these is specified or is reasonably inferred from the contract. The contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

## **CLAUSE 12**

### **Deviations/Variations-extent and pricing**

The Engineer-in-charge shall have power (i) to make alterations in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the work in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the work in accordance with any instructions given to him in writing signed by the Engineer-in-charge and such alterations, omission, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the work, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

12.1 The time for completion of the work shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows :

- i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus
- ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-charge.

### **Deviation, Extra items and pricing**

#### **12.2 A) For Project & Original Work**

In the case of extra items (s) the contractor may be within fifteen days of receipt of order of occurrence of the item(s) claim rates, supported by proper analysis, for the work and Engineer-in-Charge shall within one month of the receipt of the claim supported by analysis after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

#### **12.2 B) Deviation, Substituted Items, Pricing**

In the case of substitute items, the rate for the agreement items (to be substituted) and substituted item shall also be determined in the manner as follows;

- (a) If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted) the rate payable the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates for substituted item and the agreement item (to be substituted).
- (b) If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted) the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

### C) Deviation, Deviated Quantities, Pricing

In the case of contract items substituted items, contract cum substituted item which exceed the percentage set out in the tender documents (referred to as deviation limit), the contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis, for the work in excess of the above mentioned limits provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities the Engineer-in-Charge shall within one month of receipt of the claim supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined. The quantity of all materials given in the Price Schedules of the bidding documents are provisional. The variation in quantity shall be limited to plus/minus (+/-) twenty five percent (25%) for the individual items; total variations in all items under the contract shall be limited to ten percent (10%) of the contract price. For quantity variation of the individual items beyond twenty five percent (25%), the matter shall be referred to the Employer for mutually agreed rates. **(Deviations in quantities of individual items up to ±10% of agreement quantity will no need any prior approval of TS authority and sanction of deviations is also not required).**

- 12.3 The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the percentage set out in the tender documents (referred to as deviation limit), and the Engineer-in-Charge shall after giving notice to the contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period fifteen days having regard to the market rates.
- 12.4 The contractor shall send to the Engineer-in-Charge once every three months an upto date account giving complete details of all claim for additional payments to which the contractor may consider himself entitled and all of additional work ordered by the Engineer-in-Charge which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the Chief Engineer may authorize consideration of such claims on merits.
- 12.5 For the purpose of operation of Clause 12.2 & 12.3, the following works shall be treated as works relating to foundations for which deviation limits shall be 100 per cent.
- i) For buildings, compound walls; plinth level or 1.2 meters above ground level whichever is lower excluding items of flooring and D.P.C but including base concrete below the floors
  - ii) For abutment, piers, retaining walls of culverts and bridges, walls of water reservoirs; the door floor level.
  - iii) For retaining walls where floor level is not determinate; 1.2 meters above the average ground level or bed level.
  - iv) For roads; all items of excavation and filling including treatment of sub-base.
  - v) For water supply lines, sewer lines, underground storm water drains and similar works; all items of work below ground level except items of pipe work, masonry work.
  - vi) For open storm water drains; all items of work except lining of drains.
- 12.6 Any operation incidental to or necessarily has to be in contemplation of tenderer while filling tender, or necessary for proper execution of the item included in the Schedule of Quantities or in the schedule of rates mentioned above, whether or not specifically indicated in the description of the item and the relevant specifications, shall be deemed to

be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

### **CLAUSE 13**

#### **Fore closure of contract due to abandonment or reduction in scope of work.**

If at any time after acceptance of the tender the NDMC shall decide to abandon or reduce the scope of the work for any reason whatsoever and hence not require the whole or any part of the works to be carried out, the Engineer-in-charge shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The contractor shall be paid at contract rates full amount for works executed at site and, in addition, a reasonable amount as certified by the Engineer-in-charge for the items hereunder mentioned which could not be utilized on the work to the full extent in view of the for enclosure.

- i) Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office, storage tanks.
- ii) The NDMC shall have the option to take over contractor's materials or any part thereof either brought to site or which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work) provided, however, the NDMC shall be bound to take over the materials or such portions thereof as the contractor does not desire to retain. For materials taken over or to be taken over by the NDMC, cost of such materials as detailed by Engineer-in-charge shall be paid. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor.
- iii) If any materials supplied by the NDMC are rendered surplus, the same except normal wastage shall be returned by the contractor to the NDMC at rates not exceeding those at which these were originally issued less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor. In addition cost of transporting such materials from site to the NDMC stores, if so required by the NDMC, shall be paid.
- iv) Reasonable compensation for transfer for T & P from site to contractor's permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable.
- v) Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary.

The contractor shall, if required by the Engineer-in-charge furnish to him books of account, wage books, time sheets and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition.

The reasonable amount of items on (i), (iv) and (v) above shall not be excess of 2% of the cost of the work remaining incomplete on the date of closure, i.e. total stipulated cost of the work as per accepted tender less the cost of work actually executed under the contract and less the cost of contractor's materials at site taken over by the NDMC as per item (ii) above. Provided

always that against any payments due to the contractor on this account or otherwise, the Engineer-in-charge shall be entitled to recover or be credited with any outstanding balances due from the contractor for advance paid in respect of any tools, plants and materials and any other sums which at the date of termination were recoverable by the NDMC from the contractor under the terms of the contract.

#### **CLAUSE 14**

##### **Cancellation of contract in full or part**

If contractor:

- (i) at any time makes default in proceeding with the works or any part of the work with the due diligence and continue to do so after a notice in writing of 7 days from the Engineer-in-charge; or
- ii) commits default to complying with any of the terms and conditions and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-charge; or
- iii) fails to complete the works or items of work with individual dates of completion, on or before the date(s) of completion, and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-charge; or
- iv) shall offer or give or agree to give to any person in the NDMC service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for the NDMC; or
- v) shall enter into a contract with the NDMC in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer-in-charge; or
- vi) shall obtain a contract with the NDMC as a result of wrong tendering or other non-bonafide methods of competitive tendering; or
- vii) being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors; or
- viii) being a company, shall pass a resolution or the Court shall make an order for the winding up of the company, or a receiver or manager on behalf of the debenture holders or otherwise shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or manger; or

- ix) shall suffer an execution being levied on his goods and allow it to be continue for a period of 21 days; or
- x) assigns, transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer-in-charge. ;
- xi) The NDMC may, without prejudice to any other right or remedy which shall have accrued or shall accrue hereafter to the NDMC, by a notice in writing cancel the contract as a whole or only such items of work in default from the contract. The Engineer-in-charge shall on such cancellation by the NDMC have powers to take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or carry out the incomplete work by any means at the risk and cost of the contractor.
- xii) On cancellation of the contract in full or in part, the Engineer-in-charge shall determine what amount, if any, is recoverable from the contractor for completion of the works or in case the works or part of the works is not to be completed, the loss or damage suffered by the NDMC. In determining the amount, credit shall be given to the contractor for the value of the work executed by him up to the time of cancellation, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor.
- xiii) Any excess expenditure incurred or to be incurred by the NDMC in completing the works or part of the works or the excess loss or damages suffered or may be suffered by the NDMC as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to the NDMC in law be recovered from any moneys due to the contractor on any account, and if such moneys are not sufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days
- xiv) If the contractor shall fail to pay the required sum within the aforesaid period of 30 days, the Engineer-in charge shall have the right to sell any or all of the contractors unused materials, constructional plant, implements, temporary buildings, etc. and apply the proceeds of sale thereof towards the satisfaction of any sums due from the contractor under the contract and if thereafter there be any balance outstanding from the contractor, it shall be recovered in accordance with the provisions of the contract.
- xv) Any sums in excess of the amounts due to the NDMC and unsold materials, constructional plant, etc., shall be returned to the contractor, provided always that if cost or anticipated cost of completion by the NDMC of the works or part of the works is less than the amount which the contractor would have been paid had he completed the works or part of the works, such benefits shall not accrue to the contractor.

## **CLAUSE 15**

### **Suspension of work**

- a) The contractor shall, on receipt of the order in writing of the Engineer-in-charge, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in charge may consider necessary so as to cause any damage or injury to the work



already done or endanger the safety thereof for any of the following reasons :

- a. on account of any default on the part of the contractor; or
- b. for proper execution of the works or part thereof for reasons other than the default of the contractor; or
- c. for safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-charge.

- b) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:
  - a. the contractor shall be entitled to an extension of time equal to the period of every such suspension plus 25%, for completion of the item or group of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and ;
  - b. If the total period of all such suspensions in respect of an item or group of items of work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Engineer-in-charge may consider reasonable in respect of salaries and/or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2% to cover indirect expenses of the contractor. Provided the contractor submits his claim supported by details to the Engineer-in-charge within fifteen days of the expiry of the period of 30 days.
- c) If the works or part thereof is suspended on the orders of the Engineer-in-charge for more than three months at a time, except when suspension is ordered for reasons (a) in sub-para (i) above, the contractor may after receipt of such order serve a written notice on the Engineer-in-charge of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by the NDMC or where it affects whole of the works, as an abandonment of the works by the NDMC, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Engineer-in-charge. In the event of the contractor treating the suspension as an abandonment of the contract by the NDMC, he shall have no claim to payment of any compensation on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Engineer-in-charge may consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-charge within 30 days of the expiry of the period of 3 months.

Provided, further, that the contractor shall not be entitled to claim any compensation from the NDMC for the loss suffered by him on account of delay by the NDMC in the supply of materials where such delay is covered by difficulties relating to the supply of wagons, force majeure

including non allotment of such materials by controlling authorities, acts of God, acts of enemies of the state/country or any reasonable cause beyond the control of the NDMC.

## **CLAUSE 16**

### **Action in case work not done as per specifications.**

All works under or in course of executed in pursuance of the contract shall at all times be open and accessible to the inspection and supervision of the Engineer-in-charge, his authorized subordinates in charge of the work and all the superior officers, officers of the Quality Control Organization of the NDMC and of the Chief Technical Examiner's office, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

If it shall appear to the Engineer-in-charge or his authorized subordinates in charge of the work or to the Chief Engineer-in-charge of Quality Control or his subordinate officers or to the Chief Technical Examiner or his subordinate officers, that nay work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within six months of the completion of the work from the Engineer-in-charge specifying the work materials or articles complained of notwithstanding that the same may have been passed, certified and paid for, forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of his failing to do so within a period specified by the Engineer-in-charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 2 of the contract (for non-completion of the work in time) for this default.

In such case the Engineer-in-charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the Chief Engineer may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer-in-charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

## **CLAUSE 17**

### **Contractor liable for damages, defects during maintenance period**

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road curb, fence enclosure, water pipe, cables drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part of it is being executed, or if any damage shall happen to the work while in progress, from any work or any part of it is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve

months (6 months in the case of work other than road work costing Rs. 10 lacs and below) after a certificate final or otherwise of its completion shall have been given by the Engineer-in-charge as aforesaid arising out of defects or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-charge may cause the same to be made good by the other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of twelve months (6 months in the case of work other than road work costing Rs. 10 Lacs and below) after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later. Provided that in the case of road work if in the opinion of the Engineer-in-charge, half of the security deposit is sufficient to meet all liabilities of the contractor under his contract, half of the security deposit will be refundable after six bill has been prepared and passed whichever is later.

## **CLAUSE 18**

### **Contractor to supply tools and plants etc**

The contractor shall provide at his own cost all materials (except such special materials, if any, as may in accordance with the contract be supplied from the NDMC stores), plant, tools, appliances, implements, ladders, cordage, tackle scaffolding and temporary works required for the proper execution of the work, whether original altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirement of the Engineer-in-charge as any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled require together with carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and material, necessary for the purpose of setting out works, and counting, weighing and assisting in the measurement or examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor, under this contract or otherwise and/or from his security deposit.

## **CLAUSE 18 A**

### **Recovery of compensation paid to workman**

In every case in which by virtue of the provisions of sub-section (1) of section 12 of Workmen's Compensation Act, 1923, the NDMC is obliged to pay compensation to a workman employed by the contractor in execution of the works, the NDMC will recover from the contractor the amount of the compensation so paid, and without prejudice to the rights of the NDMC under sub-section (2) of section 12 of the said Act, the NDMC shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the NDMC to the contractor whether under this contract or otherwise. The NDMC shall not be bound to contest any claim made against it under sub-section (1) of section 12 of said Act, except on the written request of the contractor and upon his giving to the NDMC full security for all costs for which the NDMC might become liable in consequence of contesting such claim.

## **CLAUSE 18 B**

### **Ensuring payment and amenities to workers if contractor fails**

In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and of the Contract Labour (Regulation and Abolition) Central Rules, 1971, the NDMC is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said act and the rules under clause 19 H or under Contractor's Labour Regulations, or under the Rules framed from time to time for the protection of contractor the amount of wages so paid or the amount of expenditure so incurred; and without prejudice to the rights of the NDMC under sub-section (2) of section 20 and sub-section (4) of section 21 of the Contract Labour (Regulation and Abolition) Act, 1970, the NDMC shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the NDMC to the contractor whether under this contract or otherwise. The NDMC shall not be bound to contest any claim made against it under sub-section (1) of section 20 and sub-section (4) of section 21 of the said Act, except on the written request of the contractor and upon his giving to the NDMC full security for all costs for which the NDMC might become liable in contesting such claim.

## **CLAUSE 19**

### **Labour laws to be complied by the contractor**

The contractor shall obtain a valid license under the Contract Labour (R & A) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971 before the commencement of the work, and continue to have a valid licence until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986.

The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.

Any failure to fulfill this requirement shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

### **CLAUSE 19 A**

No labourer below the age of eighteen years shall be employed of the work.

### **CLAUSE 19 B**

#### **Fair Wage Clause : Payment of Wages:-**

- a) The contractor shall pay to labour employed by him either directly or through sub-contractors, wages not less than fair wages as defined in the Contractor's Labour Regulation or as per the provisions of the Contract Labour (Regulation and Abolition) ACT, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.
- b) The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his subcontractors in connection with the said work, as if the labour had been immediately employed by him.
- c) In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with the Contractor's Labour Regulation made by Government from time to time in regard to payment of wages, wage period, deductions from wages, recovery of wages

not paid and deductions unauthorisedly made, maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

- d) The Engineer-in-charge shall have the right to deduct from the moneys due to the contractor, any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by the terms of the contract or non-observance of the regulations.

Under the provision of Minimum Wages (Central) Rules, 1950, the contractor is bound to allow to the labours directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labours and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-charge concerned.

In the case of Union Territory of Delhi, however as the all inclusive minimum daily wages fixed under Notification of the Delhi Administration No.F.12(162)MWO/DAB/43884-91, dated 31.12.1979 as amended from time to time are inclusive of wages for the weekly day of rest, the question of extra payment for weekly holiday would not arise.

- e) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961 and the Contract Labour (Regulation and Abolition) Act, 1970 or the modification thereof or any other laws relating thereto and the rules made there under from time to time.
- f) The contractor shall indemnify and keep indemnified the NDMC against payments to be made under and for the observance of the laws aforesaid and the Contractor's Labour Regulations without prejudice to his right to claim indemnity from his sub-contractors.
- g) The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.
- h) Whatever is the minimum wage for the time being, or if the wages payable is higher than such wage, such wage shall be paid by the contractor to the workmen directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.
- i) The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.

## **CLAUSE 19 C**

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his own expense arrange for the safety

provisions as per Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangements and provide necessary facilities as aforesaid he shall be liable to pay a penalty of Rs. 200/- for each default and in addition the Engineer-in-charge shall be at liberty to make arrangements and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

#### **CLAUSE 19 D**

The contractor shall submit, by the 4th and 19th of every month, to the Engineer-in-charge a true statement showing in respect of the second half of the preceding month and the first half of the current month, respectively

- (1) the number of labourers employed by him on the work,
- (2) their working hours,
- (3) the wages paid to them,
- (4) the accidents that occurred during the said fortnight showing the circumstances under which they happened and extent of damage and injury caused by them, and
- (5) the number of female workers who have been allowed maternity benefit according to clause 19F and the amount paid to them

Failing which, the contractor shall be liable or pay to the NDMC a sum not exceeding Rs. 200/- for each default or materially incorrect statement. The decision of the Engineer-in-charge shall be final in deducting from any bill due to the contractor the amount levied as fine and be binding on the contractor.

#### **CLAUSE 19 E**

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by the NDMC from time to time for the protection of health and sanitary arrangements for workers employed by the contractor.

#### **CLAUSE 19 F**

Leave and pay during leave shall be regulated as follows:

##### **a) Leave :**

- (i) In case of delivery, maternity leave not exceeding 8 weeks, 4 weeks upto and including the day of delivery and 4 weeks following that day.
- (ii) In case of miscarriage: - upto 3 weeks from the date of miscarriage.

##### **b) Pay :-**

- (i) In case of delivery: - leave pay during maternity leave will be at the rate of woman's average daily earnings, calculated on the total wages earned on the days when full time work was done during a period of three months immediately preceding the date on which she gives notice that she expects to be confined or at the rate of Rupees one only per day whichever is greater.

- (iii) In case of miscarriage :- leave pay at the rate of average daily earnings calculated on the total wages earned on the days when full time work was done during a period of 3

months immediately preceding the date of such miscarriage.

- c) **Conditions for the grant of maternity leave:** - No maternity leave benefit shall be admissible to a woman unless she has been employed for a total period of not less than 6 months immediately preceding the date on which she proceeds on leave.
- d) The contractor shall maintain a register of maternity benefit in the following form and the same shall be kept at the place of work.

#### **CLAUSE 19 G**

In the event of the contractor committing a default or breach of any of the provisions of the Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for the works as amended from time to time or furnishing any information or submitting or filling any statement under the provisions of the above regulations and rules which is materially incorrect, he shall, without prejudice to any other liability, pay to the NDMC a sum not exceeding Rs. 200/- for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractor defaulting continuously in this respect, the penalty may be enhanced to Rs. 200/- per day for each day of default subject to a maximum of 5percent of the estimated cost of the work put to tender. The decision of the Engineer-in-charge shall be final and binding on the parties.

Should it appear to the Engineer-in-charge that contractor is not properly observing and complying with the provisions of the Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for work people employed by the contractor (hereinafter referred to as "the said rules") and the provisions of the Contract Labour (Regulation and Abolition Act, 1970 and the Contract Labour (R and A) Central Rules, 1971, the Engineer-in-charge shall have power to give notice in writing to the contractor requiring that the said rules be complied with and the amenities prescribed therein be provided to the workpeople within a reasonable time to be specified in the notice. If the contractor shall fail within the period specified in the notice to comply with and observe the said rules and to provide the amenities to the work people as aforesaid, The Engineer-in-charge shall have the power to provide the amenities herein before mentioned at the cost of the contractor.

The contractor shall erect, make and maintain at his own expense and according to approved standards all necessary tents and sanitary arrangements required for his work-people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-charge shall have power to give notice in writing to the contractor requiring that the said tents and sanitary arrangements be remodeled and/or reconstructed according to approved standards, and if the contractor shall fail to remodel or reconstruct such tents and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer-in-charge shall have the power to remodel and reconstruct such tents and sanitary arrangements according to approved standards at the cost of contractor.

#### **CLAUSE 19 H (Deleted)**

The contractor shall at his own cost provide his labour with sufficient number of huts (hereinafter referred to as the camp) of the following specifications on a suitable plot of land to be approved by the Engineer-in-charge.

(i) (a) The minimum height of each hut at the eaves level shall be 2.10m and floor area to be provided will be at the rate of 2.70 sq.m. for each member of the worker's family staying with the labourer.

(b) The contractor shall in addition construct suitable cooking places having a minimum area of 1.80 m.

(c) The contractor shall also construct temporary latrines and urinals for the use of the labourers each on the scale of not of not less than four per each one hundred of the total strength, separate, separate latrines and urinals being provided for women.

(d) The contractor shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitable screened.

(ii) (a) All the huts shall have walls of sun-dried or burnt bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer-in-charge. In case of sun-dried bricks, the walls should be plastered with mud gobri on both sides. The floor may be katcha but plastered with mud gobri and shall be at least 15 cm. above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-charge and the contractor shall ensure that throughout the period of their occupation the roofs remain water tight.

(b). The contractor shall provide each hut with proper ventilation.

(c) All doors, windows, and ventilators shall be provided with suitable leaves for security purposes.

(d) There shall be kept an open space of at least 7.20 m between the rows of huts which may be reduced to 6.0 m according to the availability of site with the approval of the Engineer-in-charge. Back to back construction will be allowed.

(iii) Water Supply :- The contractor shall provide adequate supply of water for the use of labourers. The provisions shall not be less than 10 litres of pure and wholesome water per head day for drinking purposes and 15 litres of clean water per head per day for bathing and washing purpose. Where piped water supply is available, supply shall be at stand posts and where the supply is from wells or river, tanks which may be of metal or masonry shall be provided. The contractor shall also at his own cost make arrangements for laying pipe lines for water supply to his labour camp from the existing main wherever available, and shall pay all fees and charges therefore.

(iv). The site selected for the camp shall be high ground, removed from jungle.

(v) Disposal of excreta: - The contractor shall make necessary arrangements for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the Local Health Authorities. If trenching or incineration is not allowed, the contractor shall make arrangements for the removal of the excreta through the Municipal Authority and inform it about the number of labourers employed so that arrangements may be made by such Authority for the removal of the excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Authority. The contractor shall provide one sweeper for every eight seats in case of dry system.



(vi). Drainage: - The contractor shall provide efficient arrangements for draining away sullage water so as to keep the camp neat and tidy.

(vii). The contractor shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.

(viii) Sanitation :- The contractor shall make arrangements for conservance and sanitation in the labour camps according to the rules of the Local Public Health and Medical Authorities.

#### **CLAUSE 19 I**

The Engineer-in-charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractor's employ upon the work who may be incompetent or misconduct himself and the contractor shall forthwith comply with such requirements.

#### **CLAUSE 19 J**

It shall be the responsibility of the contractor to see that building under construction is not occupied by any body unauthorized during construction, and is handed over to the Engineer-in-charge with vacant possession of complete building. If such building though completed, is occupied illegally, then the Engineer-in-charge shall have the option to refuse to accept the said building/buildings in that position, any delay in acceptance on this account will be by the treated as delay in completion and for such delay a levy upto 5% of the tendered value of work may be imposed by the Chief Engineer whose decision shall be final both with regard to the justification and quantum and be binding on the contractor.

However, the Chief Engineer may require the contractor through a notice to remove the illegal occupation any time on or before construction and delivery.

#### **CLAUSE 20**

##### **Minimum Wages Act to be complied with**

The contractor shall comply with all the provisions of the Minimum Wages Act., 1948, Contract Labour(Regulation and Abolition) ACT, 1970 amended from time to time and rules framed thereunder and other Labour laws affecting contract labour that may be brought into force from time to time.

#### **CLAUSE 21**

##### **Work not be sublet. Action in case of insolvency.**

The contract shall not be assigned or sublet without the written approval of the Engineer-in-charge. And if the contractor shall assign or sublet this contract, or attempt so to do, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor or any of his servants or agents or agents to any public officer or person in the employ of the NDMC in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-charge on behalf of the NDMC shall have power to adopt any of the courses specified in Clause 3 in best

suited to the interest of the NDMC and in the event of any such courses being adopted the consequences specified in the said Clause 3 shall ensue.

## **CLAUSE 22**

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of the NDMC without reference to the actual loss or damage sustained ,and whether or not any damage shall have been sustained.

## **CLAUSE 23**

### **Changes in firm's constitution to be intimated.**

Where the contractor is a partnership firm, the previous approval in writing of the Engineer-in-charge shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the work hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 21.

## **CLAUSE 24**

### **Work to be under direction of Engineer-in-charge**

All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer-in-charge who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

## **CLAUSE 25**

### **Settlement of disputed & Arbitration**

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specification, designs, drawings and instructions herein before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter :-

- (i) If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-charge on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable, he shall promptly within 15 days request the Superintending Engineer in writing or written instructions or decision. Thereupon, the Superintending Engineer shall give his written instructions or decision within a period of one month from the receipt of the contractor's letter.

If the Superintending Engineer fails to give his instructions or decision in writing within the aforesaid period or if the contractor is dissatisfied with the instructions or decision of the Superintending Engineer, the contractor may, within 15 days of the receipt of Superintending Engineer's decision, appeal to the Chief Engineer who shall afford an

opportunity to the contractor to be heard, if the latter so desired, and to offer evidence in support of his appeal. The Chief Engineer shall give his decision within 30 days of receipt of contractor's appeal. If the contractor is dissatisfied with this decision, the contractor shall within a period of 30 days from receipt of the decision, give notice to the Chairperson, NDMC for appointment of arbitrator failing which the said decision shall be final, binding and conclusive and not referable to adjudication by the arbitrator.

- (ii) Except where the decision has become final, binding and conclusive in terms of sub-para (i) above disputes or difference shall be referred for adjudication through arbitration by a sole arbitrator appointed by the Chairperson, NDMC or if there be no Chairperson, the administrative head of the NDMC. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another sole arbitrator shall be appointed in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor. It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each such dispute along with the notice for appointment of arbitrator and giving reference to the rejection by the Chief Engineer of the appeal. It is also a term of this contract that no person other than a person appointed by the Chairperson or the administrative head of the NDMC, as aforesaid should act as arbitrator in respect of any claim in writing as aforesaid within 120 days of receiving the intimation from the Engineer-in-charge that the final bill is ready for payment, the claim of the contractor shall be deemed to have been waived and absolutely barred and the NDMC shall be discharged and released of all liabilities under the contract in respect of these claims.

The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 (26 of 1996) or any statutory or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.

It is also a term of this contract that the arbitrator shall adjudicate on only such disputes as are referred to him by the appointing authority and give separate award against each dispute and claim referred to him and in all cases, the arbitrator shall give reasons for the award. It is also a term of the contract that if any fees are payable to the arbitrator, these shall be paid equally by both the parties. It is also a term of the contract the arbitrator shall be deemed to have entered on the reference on the date he issued notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any, of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof shall be paid and fix or settle the amount of costs to be so paid.

Notwithstanding anything contained in this contract, the parties shall not be entitled to invoke reference of dispute to the arbitration after acceptance of the final payment until it is so recorded on the bill that the same was being received under protest.

The decision of Chief Engineer regarding the quantum of reduction as well as justification thereof in respect of rates for sub-standard work which may be decided to be accepted will be final and would not be open to arbitration.

## **CLAUSE 26**

### **Contractor to indemnify the NDMC against Patent Rights**

The contractor shall fully indemnify and keep and indemnified the N.D.M.C against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties, which may payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against the NDMC in respect of any such matters as aforesaid, the contract shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise there from; provided that the contractor shall be liable to indemnify the N.D.M.C, if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-charge in this behalf.

## **CLAUSE 27**

### **Lump sum provisions in tender.**

When the estimate on which a tender is made includes lump sum in respect of parts of the work, the contractors shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates, as are payable under this contract for such items, or if the part of the work in question is not, in the opinion of the Engineer-in-charge capable of measurement, the Engineer-in-charge may at his discretion pay the lump sum amount entered in the estimate, and the certificate in writing of the Engineer-in-charge shall be final and conclusive against the contractor with regard to any sum payable to him under the provisions of the clause.

## **CLAUSE 28**

### **Action where no Specifications are specified.**

In the case of any class of work for which there is no such specifications as referred to in Clause 11, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturer's specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-charge.

## **CLAUSE 29**

### **Withholding and lien in respect of sums due from contractor.**

Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the contractor, the Engineer-in-charge or the NDMC shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Engineer-in-charge or the N.D.M.C, shall be entitled to withhold the security deposit, if any, furnished as the case may be and also have a

lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, the Engineer-in-charge or the N.D.M.C shall be entitled to withhold and have a lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the Engineer-in-charge or the N.D.M.C. or any contracting person through the Engineer in- charge pending finalization or adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Engineer-in-charge or N.D.M.C will be kept withheld or retained as such by the Engineer-in-charge or N.D.M.C till the claim arising out of or under the contract is determined by the arbitrator(if the contract is governed by the arbitration clause) or by the competent court, as the case may be and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause, where the contractor is a partnership form or a limited company, the Engineer-in-charge or the N.D.M.C shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/limited company as the case may be, whether in his individual capacity or otherwise.

The N.D.M.C shall have the right to cause an audit and technical examination of the works and final bill of the contractor including all supporting vouchers, abstract etc., to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of overpayment and it shall be lawful for the N.D.M.C to recover the same from him in the manner prescribed in sub-clause (1) of this clause or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by the N.D.M.C to the contractor, without any interest thereon whatsoever.

## **CLAUSE 29 A**

### **Lien in respect of claims in other contracts**

Any sum of money due and payable to the contractor (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Engineer-in-charge or the NDMC or any other contracting person or persons through Engineer-in-charge against any claim of the Engineer-in-charge or NDMC or such other person or persons in respect of payment of a sum of money arising out of or under or any other contract made by the contractor with Engineer-in-charge of the NDMC or with such other person or persons.

It is agreed term of the contract that the sum of money so withheld or retained under this clause by the Engineer-in- charge or the N.D.M.C will be kept withheld or retained as such by the Engineer-in-charge or the NDMC or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be, and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

## **CLAUSE 30 (Deleted)**

### **Employment of coal mining or controlled area labour not permissible**

The contractor shall not employ coal mining or controlled area labour falling under any category whatsoever on or in connection with the work or recruit labour from area within a radius of 32 km (20 miles) of the controlled area. Subject as above the contractor shall employ imported labour only i.e., deposit imported labour or labour imported by contractors from area, from which import is permitted.

Where ceiling price for imported labour has been fixed by State or Regional Labour Committee not more than that ceiling price shall be paid to the labour by the contractor.

The contractor shall immediately remove any labourer who may be pointed out by the Engineer-in-charge being a coal mining or controlled area labourer. Failure to do so shall render the contractor liable to pay to NDMC a sum calculated at the rate of Rs.10/- per day per labourer. The certificate of the Engineer-in-charge about the number of coal mining or controlled area labourer and the number of days for which they worked shall be final and binding upon all parties to this contract.

It is declared and agreed between the parties that the aforesaid stipulation in this clause is one in which the public are interested within the meaning of the exception in Section 74 of Indian Contract Act, 1872.

Explanation:- Controlled Area means the following areas:

Districts of Dhanbad, Hazaribagh, Jamtara - a Sub-Division under Santhal Pargana Commissionery, Districts of Bankuara, Birbhum, Burdwan, District of Bilaspur.

Any other area which may be declared a Controlled Area by or with the approval of the Central Government.

## **CLAUSE 31**

### **Unfiltered water supply**

This will be subject to the following conditions regarding water supply:-

- (i) That the water used by the contractor shall be fit for construction purposes to the satisfaction of the Engineer-in-charge
- (ii) The Engineer-in-charge shall make alternative arrangements for supply of water at the risk and cost of contractor if the arrangements made by the contractor for procurement of water are in the opinion of the Engineer-in-charge unsatisfactory.

## **CLAUSE 32**

### **Alternate water arrangements**

- (i) Where there is no piped water supply arrangement and the water is taken by the contractor from the wells or hand pumps constructed by the NDMC no charge shall be recovered from the contractor on that account. The contractor shall, however, draw water at such hours of the day that it does not interfere with the normal use for which the hand pumps and wells are intended. He will also be responsible for all damages and abnormal

repairs arising out of his use, the cost of which shall be recoverable from him. The Engineer-in-charge shall be the final authority to determine the cost recoverable from the contractor on this account and his decision shall be binding on the contractor.

- (ii) The contractor shall be allowed to construct temporary wells in the NDMC land for taking water for construction purposes only after he has got permission of the Engineer-in-charge in writing. No charges shall be recovered from the contractor on this account, but the contractor shall be required to provide necessary safety arrangements to avoid any accidents or damage to adjacent buildings, roads and service lines. He shall be responsible for any accidents or damage caused due to construction and subsequent maintenance of the wells and shall restore the ground to its original conditions after the wells are dismantled on completion of the work.

## **CLAUSE 33**

### **Return of surplus materials**

Notwithstanding anything contained to the contrary in this contract, where any materials for the execution of the contract are procured with the assistance of the NDMC either by issue from the NDMC stores or purchase made under orders or permits or licenses issued by the NDMC or Govt. the contractor shall hold the said materials economically and solely for the purpose of the contract and not dispose of them without the written permission of the NDMC and return, if required by the Engineer-in-charge, all surplus or serviceable materials that may be left with him after the completion of the contract or at its termination for any reason whatsoever on being paid or credited such price as the Engineer-in-charge shall determine having due regard to the conditions of the materials. The price allowed to the contractor, however, shall not exceed the amount charged to him excluding the element of storage charges. The decision of the Engineer-in-charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to action for contravention of the terms of the license or permit and/or for criminal breach of trust, be liable to the NDMC for all moneys, advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach.

## **CLAUSE 34**

### **Hire of Plant & Machinery**

- (i) The contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T&P) required for execution of the work except for the Plant & Machinery listed in Schedule 'C' and stipulated for issue to the contractor. If the contractor requires any item of T&P on hire from the T&P available with the NDMC over and above the T&P stipulated for issue, the NDMC will, if such item is available, hire it to the contractor at rates to be agreed upon between him and the Engineer-in-charge. In such a case, all the conditions hereunder for issue of T&P shall also be applicable to such T&P as is agreed to be issued.
- (ii) The Plant and Machinery when supplied on hire charges shown in Schedule 'C' shall be made over and taken back at the departmental equipment yard/shed shown in Schedule 'C' and the contractor shall bear the cost of carriage from the place of issue to the site of work and back.
- (iii) The contractor shall be responsible to return the plant and machinery with condition in which it was handed over to him, and he shall be responsible for all damage caused to the said plant and machinery at the site of work or elsewhere in operation and otherwise

- during transit including damage to or loss of plant and for all losses due to his failure to return the same soon after the completion of the work for which it was issued. The Divisional Engineer shall be the sole judge to determine the liability of the contractor and its extent in this regard and his decision shall be final and binding on the contractor.
- (iv) The plant and machinery as stipulated above will be issued as and when available and if required by the contractor. The contractor shall arrange his programme of work according to the availability of the plant and machinery and no claim, whatsoever, will be entertained from him for any delay in supply by the Department.
  - (v) The hire charges shall be recovered at the prescribed rates from and inclusive of the date the plant and machinery made over upto and inclusive of the date of the return in good order even though the same may not have been working for any cause except major breakdown due to no fault of the contractor or faulty use requiring more than three working days continuously (excluding intervening holidays and Sundays) for bringing the plant in order. The contractor shall immediately intimate in writing to the Engineer-in-charge when any plant or machinery gets out of order requiring major repairs as aforesaid. The Engineer-in-Charge shall record the date and time of receipt of such intimation in the log sheet of the plant or machinery. Based on this if the breakdown before lunch period or major breakdown will be computed considering half a day's breakdown on the day of complaint. If the breakdown occurs in the post lunch period of major breakdown will be computed starting from the next working day. In case of any dispute under this clause, the decision of the Superintending Engineer shall be final and binding on the contractor.
  - (vi) The hire charges shown above are for each day of 8 hours (inclusive of the one hour lunch break) or part thereof.
  - (vii) Hire charges will include service of operating staff as required and also supply of lubricating oil and stores for cleaning purposes. Power fuel of approved type, firewood, kerosene oil etc. for running the plant and machinery and also the full time *chowkidar* for guarding the plant and machinery against any loss or damage shall be arranged by the contractor who shall be fully responsible for the safeguard and security of plant and machinery. The contractor shall on or before the supply of plant and machinery sign an agreement indemnifying the Department against any loss or damage caused to the plant and machinery either during transit or at site of work.
  - (viii) Ordinarily, no plant and machinery shall work for more than 8 hours a day inclusive of one hour lunch break. In case of an urgent work however, the Engineer-in-charge may, at his discretion, allow the plant and machinery to be worked for more than normal period of 8 hours a day. In that case, the hourly hire charges for overtime to be borne by the contractor shall be 50% more than the normal proportionate hourly charges ( $1/8^{\text{th}}$  of the daily charges) subject to a minimum of half day's normal charges on any particular day. For working out hire charges for over time, a period of half an hour and above will be charged as one hour and a period of less than half an hour will be ignored.
  - (ix) The contractor shall release the plant and machinery every seventh day for periodical servicing and/or wash out which may take about three to four hours or more. Hire charges for full day shall be recovered from the contractor for the day of servicing/wash out irrespective of the period employed in servicing.
  - (x) The plant and machinery once issued to the contractor shall not be returned by him on account of lack of arrangements of labour and materials, etc. on his part, the same will be returned only when they are required for major repairs or when in the opinion of the Engineer-in-charge, the work or a portion of work for which the same was issued is completed.
  - (xi) Log Book for recording the hours of daily work for each of the plant and machinery



supplied to the contractor will be maintained by the Department and will be countersigned by the contractor or his authorized agent daily. In case the contractor contests the correctness of the entries and/or fails to sign the Log Book, the decision of the Engineer-in-charge shall be final and binding on him. Hire charges will be calculated according to the entries in the Log Book and will be binding on the contractor.

- (xii) Recovery on account of hire charges for road rollers shall be made for the minimum number of days worked out on the assumption that a roller can consolidate per day and maximum quantity of materials or area surfacing as noted against each in the statement given herein after.
- (xiii) In the case of concrete mixers, the contractors shall arrange to get the hopper cleaned and the drum washed at the close of the work each day or each occasion.
- (xiv) In case rollers for consolidation are employed by the contractor himself, log book for such rollers shall be maintained in the same manner as is done in case of departmental rollers, maximum quantity of any items to be consolidated for each roller-day shall also be same as in Annexure to Clause 34(xii). For less use of rollers, recovery for the less roller days shall be made at the stipulated issue rate.
- (xv) The contractor will be exempted from levy of any hire charges for the number of days he is called upon in writing by the Engineer-in-charge to suspend execution of the work, provided Government plant & machinery in question have, in fact, remained idle with the contractor because of the suspension.
- (xvi) In the event of the contractor not requiring any item of plant and machinery issued by NDMC though not stipulated for issue in Schedule 'C' any time after taking delivery at the place of issue, he may return it after two days written notice or at any time without notice if he agrees to pay hire charges for two additional days without, in any way, affecting the right of the Engineer-in-charge to use the said plant and machinery during the said period of two days as he likes including hiring out to a third party.
- (xvii) The N.D.M.C. give no guarantee in respect of output of its T&P hired to the contractor and no reduction in rates or any compensation shall be allowed on the ground that output or performance of N.D.M.C.'s T&P was not to the contractors expectations.

#### **CLAUSE 35 (Deleted)**

##### **Conditions relating to use of asphaltic materials**

- (i) The contractor undertakes to make arrangements for the supervision of the work by the firm supplying the tar or bitumen used.
- (ii) The contractor shall collect the total quantity of tar or bitumen required for the work as per standard formula, before the asphaltic work is started and shall hypothecate it to the Engineer-in-charge. If any bitumen or tar remains unused on completion of the work on account of lesser use of materials in actual execution for reasons other than authorized changes of specification and abandonment of portion of work, a corresponding deduction equivalent to the cost of unused materials as determined by the Engineer-in-charge shall be made and the material returned to the contractor. Although the materials are hypothecated to the N.D.M.C., the contractor undertakes the responsibility for their proper watch, safe custody and protection against all risks. The materials shall not be removed from site of work without the consent of the Engineer-in-charge in writing.
- (iii) The contractor shall be responsible for rectifying defects noticed within a year from the date of completion of the work and the portion of the security deposit relating to asphaltic work shall be refunded after the expiry of this period.

## **Clause 36**

### **Employment of Technical Staff and employees**

Contractors Superintendence Supervision, Technical Staff & Employee

- (i) The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract.

The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer-in-charge, the name(s), qualifications, experience, age, address(s) and other particulars along with certificates, of the principal technical representative to be in charge of the work and other technical representative(s) who will be supervising the work. Minimum requirement of such technical representative(s) and their qualifications and experience shall not be lower than specified in Schedule 'F'. The Engineer-in-charge shall within 3 days of receipt of such communication intimate in writing his approval or otherwise of such a representative(s) to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative(s) according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical representative and other technical representative(s) shall be appointed by the contractor soon after receipt of the approval from Engineer-in-charge and shall be available at site before start of work.

All the provisions applicable to the principal technical representative under the Clause will also be applicable to other technical representative(s) The principal technical representative and other technical representative(s) shall be present at the site of work for supervision at all times when any construction activity is in progress and also present himself/themselves, as required, to the Engineer-in-charge and / or his designated representative to take instructions. Instructions given to the principal technical representative or other technical representative(s) shall be deemed to have the same force as if these have been given to the contractor. The principal technical representative and other technical representative(s) shall be actually available at site fully during all stages of execution of work, during recording/checking/test checking of measurements of works and whenever so required by the Engineer-in-Charge and shall also note down instructions conveyed by the Engineer-in-charge or his designated representative(s) in the site order book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements/checked measurements/test checked measurements. The representative(s) shall not look after any other work. Substitutes, duly approved by Engineer-in-charge of the work in similar manner as aforesaid shall be provided in event of absence of any of the representative(s) by more than two days.

If the Engineer-in-charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this clause, a recovery (non-refundable) shall be effected from the contractor as specified in Schedule 'F' and the decision of the Engineer-in-charge as recorded in the site order book and measurement recorded checked/test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint suitable technical Principal technical representative and/or other technical representative(s) and if such appointed persons are not effectively present or are absent by more than two days without duly approved substitute or do not discharge their responsibilities

satisfactorily, the Engineer-in-charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative(s) is/are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) **(in the form of copy of Form-16 or CPF deduction issued to the Engineers employed by him)** along with every on account bill/ final bill and shall produce evidence if at any time so required by the Engineer-in-charge.

- (ii) The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work. The contractor shall provide and employ skilled, semiskilled and unskilled labour as is necessary for proper and timely execution of the work.

The Engineer-in-charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in-charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Engineer-in-charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

#### **CLAUSE 37**

##### **Levy/Taxes payable by Contractor**

- (i) GST, Building and other Construction Workers Welfare Cess or any other tax or Cess in respect of this contract shall be payable by the contractor and NDMC shall not entertain any claim whatsoever in this respect.
- (ii) The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities.
- (iii) If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the NDMC and does not any time become payable by the contractor to the State Government, Local authorities in respect of any material used by the contractor in the works, then in such a case, it shall be lawful to the NDMC and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.
- (iv) ESI and EPF contributions in respect of this contract shall be payable by the contractor and any payment in respect of this shall be made by the contractor only and then NDMC shall reimbursed on actual basis. In case of any demand from the ESI & EPF authorities against the contractor, the same shall be deducted from their bills/dues.

#### **CLAUSE 38**

##### **Conditions for reimbursement of levy/taxes if levied after receipt of tenders**

Single award letter /work order shall be issued for entire project.

The payment shall be made to the contractor according to aggregate amount of the item, filled at the time of Bid, after deducting statutory tax and income tax, applicable at the time of release of payment. NDMC will not entertain any claim by the contractor whatsoever in respect of the same in entire project except price adjustment (for cables derived according to IEEMA for

which provision has been kept in the bid document and extra/additional/substitute item as per requirement of department.)

If at the time of invoicing, rerates of GST varies w.r.t. the rates of GST filled by the bidder at the time of submission of Bid, the same shall be payable/deductible from the running/final bill of the contractor.

### **CLAUSE 39**

#### **Termination of Contract on death of contractor**

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Divisional Officer on behalf of the NDMC shall have the option of terminating the contract without compensation to the contractor.

### **CLAUSE 40**

#### **If relative working in NDMC then the contractor not allowed to tender**

The contractor shall not be permitted to tender for works in the NDMC circle (Division in case of contractors of Horticulture/Nursery categories) responsible for award and execution of contracts in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the Chief Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Officer in the NDMC. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department. If however the contractor is registered in any other department, he shall be debarred from tendering in NDMC for any breach of this condition.

NOTE: By the term "near relatives" is meant wife, husband, parents and grand parents, children and grand children, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

### **CLAUSE 41**

#### **No Engineer to work as Contractor within one year of retirement**

No engineer or other officer employed in NDMC shall work as a contractor or employee of a contractor for a period of one year after his retirement from NDMC service without the previous permission of NDMC in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of NDMC as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

### **CLAUSE 42**

#### **Return of material & recovery for excess material used**

- i. After completion of the work and also at any intermediate stage in the event of non-reconciliation of materials issued, consumed and in balance (see Clause 10), theoretical quantity of materials issued by the NDMC for use in the work shall be calculated on the basis and method given hereunder:-

- a. Quantity of cement & bitumen shall be calculated on the basis of quantity of cement & bitumen required for different items of work as shown in the Schedule of Rates mentioned in Schedule 'F'. In case any item is executed for which standard constants for the consumption of cement or bitumen are not available in the above mentioned schedule/statement or cannot be derived from the same shall be calculated on the basis of standard formula to be laid down by the Engineer-in-Charge.
  - b. Theoretical quantity of steel reinforcement or structural steel sections shall be taken as the quantity required as per design or as authorized by Engineer-in-Charge, including authorized lap pages, chairs etc. plus 3% wastage due to cutting into pieces, such theoretical quantity being determined and compared with the actual issues each diameter wise, section wise and category wise separately.
  - c. Theoretical quantity of G.I. & C.I. or other pipes, conduits, wires and cables, pig lead and G.I./M.S. sheets shall be taken as quantity actually required and measured plus 5% for wastage due to cutting into pieces (except in the case of G.I./M.S. sheets it shall be 10%), such determination & comparison being made diameter wise & category wise.
  - d. For any other material as per actual requirements.
- ii. Over the theoretical quantities of materials so computed a variation shall be allowed as specified in Schedule 'F'. The difference in the net quantities of material actually issued to the contractor and the theoretical quantities including such authorized variation, if not returned by the contractor or if not fully reconciled to the satisfaction of the Engineer-in-Charge within fifteen days of the issue of written notice by the Engineer-in-charge to this effect shall be recovered at the rates double the SIR/specified in Schedule 'F', without prejudice to the provision of the relevant conditions regarding return of materials governing the contract. Decision of Engineer-in-Charge in regard to theoretical quantities of materials, which should have been actually used as per the Annexure of the standard schedule of rates and recovery at rates specified in Schedule 'F', shall be final & binding on the contractor. For non scheduled items, the decision of the Additional Chief Engineer/Superintending Engineer regarding theoretical quantities of materials which should have been actually used, shall be final and binding on the contractor.
  - iii. The said action under this clause is without prejudice to the right of the NDMC to take action against the contractor under any other conditions of contract for not doing the work according to the prescribed specifications.

## **CLAUSE 43**

### **Compensation during warlike situations**

The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer-in-charge and a certificate from him to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Engineer-in-charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-charge, such payments being in addition to compensation upto the value of the work originally executed before being damaged or

destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by the Engineer-in-charge upto Rs.5,000/- and by the NDMC for a higher amount. The contractor shall be paid for the damages/destruction suffered and for restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in-Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations (a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the A.R.P. Officers or the Engineer-in-charge (b) for any material etc. not on the site of the work or for any tools, plant, machinery, scaffolding, temporary building and other things not intended for the work.

In the event of the contractor having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as is considered reasonable by the Engineer-in-charge.

#### **CLAUSE 44**

##### **Apprentices Act provisions to be complied with**

The contractor shall comply with the provisions of the Apprentices Act, 1961 and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Superintending Engineer may, in his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

#### **CLAUSE 45**

##### **Release of Security deposit after labour clearance.**

Security Deposit of the work shall not be refunded till the contractor produces a clearance certificate from the Labour Officer. As soon as the work is virtually complete the contractor shall apply for the clearance certificate to the Labour Officer under intimation to the Engineer-in-charge. The Engineer-in-charge, on receipt of the said communication, shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, on record till after 3 months after completion of the work and/or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Security Deposit will be released if otherwise due.

## **CLAUSE 46**

### **CONSORTIUM**

- A. The Application should contain the information required for each member of the Consortium;
- B. Members of the Consortium shall nominate one member as the lead member (the “Lead Member”). The nomination(s) shall be supported by a Power of Attorney, as per the format at Annexure-A2, signed by all the other members of the Consortium;
- i. the Application should include a brief description of the roles and responsibilities of individual members, particularly with reference to financial, technical and O&M obligations;
  - ii. an individual Bidder cannot at the same time be member of a Consortium applying for this project. Further, a member of a particular Bidder Consortium cannot be member of any other Bidder Consortium applying for this project;
  - iii. members of the Consortium shall enter into a binding Joint Bidding Agreement, substantially in the form specified at Annexure-A3 (the “Jt. Bidding Agreement”), for the purpose of making the Application and submitting a Bid in the event of being short-listed. The Jt. Bidding Agreement, to be submitted along with the Application, shall, inter alia:
    - iv. convey the intent to form a consortium in accordance with this bidding document, which would become part of the contract Agreement and subsequently perform all the obligations of the bidder in terms of this consortium Agreement, in case the the Project is awarded to the Consortium;
    - v. clearly outline the proposed roles and responsibilities, if any, of each member;
    - vi. include a statement to the effect that all members of the Consortium shall be liable jointly and severally for all obligations of the bidder in relation to the Project until the Financial Close of the Project is achieved in accordance with the Contract Agreement; and
- (ii) except as provided under this TENDER document, there shall not be any amendment to the Jt. Bidding Agreement without the prior written consent of the NDMC;
- (iii) in case Bidder is a Consortium, then the term Bidder as used in this bidding document, shall include each Member of such Consortium.

#### **46.1 CHANGE IN COMPOSITION OF THE CONSORTIUM**

- a. Where the Bidder is a Consortium, change in composition of the Consortium may be permitted by the NDMC during the Bid Stage, only where:
  - (i) the Lead Member continues to be the Lead Member of the Consortium;
  - (ii) the substitute is at least equal, in terms of Technical Capacity or Financial Capacity, to the Consortium Member who is sought to be substituted and the modified Consortium shall continue to meet the pre-qualification and short-listing criteria for Bidders; and
  - (iii) the new Member(s) expressly adopt(s) the Application already made on behalf of the Consortium as if it were a party to it originally, and is not Bidder/Member/ Associate of any other Consortium bidding for this Project.
  
- b. Approval for change in the composition of a Consortium shall be at the sole discretion of the NDMC and must be approved by the NDMC in writing. The Bidder must submit its application for change in composition of the Consortium no later than 15 (fifteen) days prior to the Bid Due Date.
  
- c. The modified/ reconstituted Consortium shall submit a revised Joint Bidding Agreement and a Power of Attorney, substantially prior to the Bid Due Date.
  
- d. The option of change in composition of the Consortium which is available under Clause 46.1 A may be exercised by any Bidder who is either a Consortium or a single entity. In the case of a single entity Bidder adding a Consortium Member at the Bid Stage, the single entity Bidder shall be the Lead Member of the Consortium. Provided, however, that no member of such Consortium shall be Bidder or the member of a Consortium participating in this project.
  
- e. Bidder shall not have a conflict of interest that affects the Bidding Process. Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, the NDMC shall be entitled to forfeit and appropriate the Earnest Money Deposit or Performance Security, as the case may be, as mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by the NDMC and not by way of penalty for, inter alia, the time, cost and effort of the NDMC, including consideration of such Bidder's proposal, without prejudice to any other right or remedy that may be available to the NDMC under the TENDER Document and/ or the Contract Agreement or otherwise.



- f. The Bidder shall promptly inform the NDMC of any change in the status of the Bidder with reference to any of the eligibility criterion, and failure to do so shall render the Bidder liable for disqualification from the Bidding Process.

## **Clause 47**

### **Conflict of Interest**

Bidder shall be deemed to have a Conflict of Interest affecting the Bidding Process, if:

- (i) the Bidder, its Member or Associate (or any constituent thereof) and any other Bidder, its Member or any Associate thereof (or any constituent thereof) have common controlling shareholders or other ownership interest; provided that this disqualification shall not apply in cases where the direct or indirect shareholding of Bidder, its Member or an Associate thereof (or any shareholder thereof having a shareholding of more than 5% (five per cent) of the paid up and subscribed share capital of such Bidder, Member or Associate, as the case may be) in the other Bidder, its Member or Associate, is less than 5% (five per cent) of the subscribed and paid up equity share capital thereof; provided further that this disqualification shall not apply to any ownership by a bank, insurance company, pension fund or a public financial institution referred to in sub-section (72) of section 2 of the Companies Act, 2013. For the purposes of this Clause, indirect shareholding held through one or more intermediate persons shall be computed as follows: (aa) where any intermediary is controlled by a person through management control or otherwise, the entire shareholding held by such controlled intermediary in any other person (the "Subject Person") shall be taken into account for computing the shareholding of such controlling person in the Subject Person; and (bb) subject always to sub-clause (aa) above, where a person does not exercise control over an intermediary, which has shareholding in the Subject Person, the computation of indirect shareholding of such person in the Subject Person shall be undertaken on a proportionate basis; provided, however, that no such shareholding shall be reckoned under this sub-clause (bb) if the shareholding of such person in the intermediary is less than 26% of the subscribed and paid up equity shareholding of such intermediary; or
- (ii) a constituent of such Bidder is also a constituent of another Bidder; or
- (iii) such Bidder, its Member or any Associate thereof receives or has received any direct or indirect subsidy, grant, Contractual loan or subordinated debt from any other Bidder, its Member or Associate, or has provided any such subsidy, grant, Contractual

loan or subordinated debt to any other Bidder, its Member or any Associate thereof;  
or

- (iv) such Bidder has the same legal representative for purposes of this Bid as any other Bidder; or
- (v) such Bidder, or any Associate thereof, has a relationship with another Bidder, or any Associate thereof, directly or through common third party/ parties, that puts either or both of them in a position to have access to each other's information about, or to influence the Bid of either or each other; or
- (vi) such Bidder or any Associate thereof has participated as a consultant to the NDMC in the preparation of any documents, design or technical specifications of the Project.

For purposes of this Clause, Associate means, in relation to the Bidder/ Consortium Member, a person who controls, is controlled by, or is under the common control with such Bidder/ Consortium Member (the "Associate"). As used in this definition, the expression "control" means, with respect to a person which is a company or corporation, the ownership, directly or indirectly, of more than 50% (fifty per cent) of the voting shares of such person, and with respect to a person which is not a company or corporation, the power to direct the management and policies of such person by operation of law.

## **Clause 48**

### **PRICE ADJUSTMENT (FOR CABLES ONLY)**

The prices for execution of the entire works covered under the scope of this work shall be quoted by the Bidder. The Ex-works price component will be subject to price adjustment, only for cables stated under.

Prices for Ex-works price component for all other equipment/items except cables, Charges for Erection, Inland Freight & Insurance etc shall be FIRM and no price adjustment shall be applicable for these components for the entire duration of the Contract.

#### **Cables**

The price adjustment on the Ex-works price component, of Cables shall be as follows:

$$dP = PO \times \{0.85 + 0.15 \times (AI/AO)\} - PO + (MI - MO),$$

Where,

dP = Price Adjustment amount per kilometer of cable,

PO = Ex-works price per kilometer of cable (Quoted Price)

A = Price Index for PVC / XLPE as published by IEEMA,

MI-MO = Change in metal component of the ex-works price of particular type and size of cable,

M = (Weight in MT of metal per kilometer of cable) x (published price index of metals per MT as published by IEEMA)

In the above price adjustment formulae:

Subscript 'O' refers to indices as on 30 days prior to date of bid opening (referred to as base date indices), Subscript '1' refers to indices as on 60 days prior to date of shipment.

The price adjustment amount towards price component of cable shall be subject to a ceiling of twenty percent (200/o) of Ex-works price component of the corresponding contract price.

No price increase shall be allowed beyond the original delivery dates unless specifically stated in the Time Extension letter, if any, issued by the Employer. The Employer will, however, be entitled to any decrease in the Contract price which may be caused due to lower price adjustment amount in case of delivery beyond the original delivery dates. Therefore, in case of delivery of goods beyond the original delivery dates, the liability of the Employer shall be limited to the lower of the price adjustment amount which may be worked out either on scheduled date or actual date of dispatch of goods.

In case of non-publication of applicable indices on a particular date, which happens to be the applicable date for price adjustment purposes, the published indices prevailing immediately prior to the particular date shall be applicable. If the price adjustment amount works out to be positive, the same is payable to the Contractor by the Employer and if it works out to be negative, the same is to be recovered by the Employer from the Contractor without any ceiling.

The Contractor shall promptly submit the price adjustment invoices for the supplies made and works executed at site, positively within three (3) months from the date of shipment/work done whether it is positive or negative.

Bids shall conform to the price adjustment provisions detailed above. Bids specifying prices for items on variable basis run the risk of rejection. A bid submitted on a fixed price basis will not be rejected but the price adjustment will be treated as zero.

**SCHEDULE OF MATERIALS TO BE SUPPLIED BY N.D.M.C UNDER CLAUSE 10 OF THE  
CONDITIONS OF CONTRACT**

<b>S. no.</b>	<b>Description of material</b>	<b>Approx. Qty.</b>	<b>Issue rate (Inclusive of 2% storage charges) at which materials will be issued</b>	<b>Units in words</b>	<b>Place of delivery</b>
					<b>NDMC store free of cost</b>

Executive – Engineer (E)  
IPDS Division

Contractor

Schedule 'A'

(As referred to in Clause 2)

Table of Milestone (s)

S.No.	Description of Milestone (Physical)	Time allowed in days (from date of start)	Amount to be withheld in case of non achievement of milestone
1			
2			

Or

S.No.	Financial Progress	Time allowed (from date of start)	Amount to be withheld in case of non achievement of milestone
1	1/8 <sup>th</sup> of the whole work	1/4 <sup>th</sup> of the whole work	In the event of not achieving the necessary progress as assessed from the running payments, 1% of the tendered value of work will be withheld for failure of each milestone.
2	3/8 <sup>th</sup> of the whole work	1/2 <sup>th</sup> of the whole work	
3	3/4 <sup>th</sup> of the whole work	3/4 <sup>th</sup> of the whole work	
4	Full	Full	

## **SCHEDULE OF DEVIATION SHEET**

The tenderer should mention technical deviations (if any) w.r.t Technical Specifications of the bid document, without financial implication. However Department reserves the right to accept or reject the technical deviation.

The deviations mentioned elsewhere in the submitted bid except this sheet shall not be considered.

The financial deviation/assumption of any sort is not allowed, if tenderers do so, that will be presumed conditional tender and the department reserves the right to reject the tenders even if bidder withdraws the same after due date and time of submission of bid.

**SIGNATURE OF TENDERER**

**PRECONTRACT INTEGRITY PACT**

**General**

This pre-bid pre-contract Agreement (herein after called the Integrity Pact) is made on day of the month of 2017, between, on one hand, the ..... (Name of Owner) acting through Shri..... (Name and designation of Project Manager) (herein after called the "BUYER", which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part and M/s..... (Name of Bidder) represented by Shri\_, The Executive Engineer (herein after called the Principal / Owner" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the Principal / Owner proposes to procure (Name of the Stores/Equipment/Item) through the Bidder(s)/ Contractor(s) and the Bidder(s)/ Contractor(s) is willing to offer/has offered the stores and

WHEREAS the BIDDER is a Private Company/Public company/Government undertaking constituted in accordance with the relevant law in the matter and the Principal / Owner is the Municipal Govt of New Delhi. Established as per NDMC act 1994 performing its functions on behalf of the ..... (Name of owner).

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

Enabling the Principal / Owner to obtain the desired said stores/equipment at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the BUYER will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

## **Commitments of the Principal / Owner**

- 1.1 The Principal / Owner undertakes that no official of the Principal / Owner, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.
  - 1.2 The Principal / Owner will, during the pre-contract stage, treat all BIDDERS alike and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.
  - 1.3 All the officials of the Principal / Owner will report to the CVO, NDMC any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach
- 2.0 In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the CVO, NDMC with full and verifiable facts and the same is prima facie found to be correct by the Principal / Owner, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the NDMC and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the NDMC the proceedings under the contract would not be stalled.

## **Commitments of Bidder(s)/ Contractor(s)**

- 3.0 The Bidder(s)/ Contractor(s) commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid during any pre-contractor post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-
- 3.1 The Bidder(s)/ Contractor(s) will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Principal / Owner, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
  - 3.2 The Bidder(s)/ Contractor(s) further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any



official of the Principal / Owner or other wise in procuring the Contractor for bearing to door having one any act in relation to the obtaining or execution of the contract or any other contract with the New Delhi Municipal council for showing or for bearing to show favour or disfavor to any person in relation to the contract or any other contract with Government.

3.3 Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives and Indian Bidder(s)/ Contractor(s) shall disclose their foreign principals or associates.

3.4 Bidder(s)/ Contractor(s) shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.

3.5. **Deleted**

3.6 The Bidder(s)/ Contractor(s), either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the Principal / Owner or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

3.7 The Bidder(s)/ Contractor(s) will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

3.8 The Bidder(s)/ Contractor(s) will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

3.9 The Bidder(s)/ Contractor(s) shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the Principal / Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

3.10 The Bidder(s)/ Contractor(s) commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts. Either to principal / owner or to IEMs so appointed by NDMC.

3.11 The Bidder(s)/ Contractor(s) shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

3.12 If the Bidder(s)/ Contractor(s) or any employee of the Bidder(s)/ Contractor(s) or any person acting on behalf of the Bidder(s)/ Contractor(s), either directly or indirectly, is relative of any of the officers of the Principal / Owner, or alternatively, if any relative of an officer of the Principal / Owner has financial interest/stake in the Bidder(s)/ Contractor(s) firm, the same shall be disclosed by the Bidder(s)/ Contractor(s) at the time of filing of tender.

The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.

3.13 The Bidder(s)/ Contractor(s) shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Principal / Owner.

#### **4. Previous Transgression**

4.1 The Bidder(s)/ Contractor(s) declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDERS' exclusion from the tender process.

4.2 The Bidder(s)/ Contractor(s) agrees that if it makes incorrect statement on this subject, Bidder(s)/ Contractor(s) can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

#### **5. Deleted**

#### **6. Sanctions for Violations**

6.1 Any breach of the aforesaid provisions by the Bidder(s)/ Contractor(s) or anyone employed by it or acting on its behalf (whether with or without the knowledge of the Bidder(s)/ Contractor(s)) shall entitle the Principal / Owner to take all or any one of the following actions, wherever required:-

(i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the Bidder(s)/ Contractor(s). However, the proceedings with the other Bidder(s)/ Contractor(s) would continue.

(ii) The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/Performance

Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the Principal / Owner and the Principal / Owner shall not be required to assign any reason therefore.

- (iii) To immediately cancel the contract, if already signed, without giving any compensation to the Bidder(s)/ Contractor(s).
- (iv) To recover all sums already paid by the Principal / Owner, and in case of an Indian Bidder(s)/ Contractor(s) with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the UBOR. If any outstanding payment is due to the BIDDER from the B Principal / Owner in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.
- (v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the Bidder(s)/ Contractor(s), in order to recover the payments, already made by the Principal/ Owner along with interest.
- (vi) To cancel all or any other Contracts with the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) shall be liable to pay compensation for any loss or damage to the Principal / Owner resulting from such cancellation/rescission and the Principal / Owner shall be entitled to deduct the amount so payable from the money(s) due to the Bidder(s)/ Contractor(s)
- (vii) To debar the Bidder(s)/ Contractor(s) from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the Principal / Owner
- (viii) To recover all sums paid in violation of this Pact by Bidder(s)/ Contractor(s) to any middleman or agent or broker with a view to securing the contract.
- (ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the Principal / Owner with the Bidder(s)/ Contractor(s), the same shall not be opened.
- (X) Forfeiture of Performance Bond in case of a decision by the Principal / Owner to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.2 The Principal/Owner will be entitled to take all or any of the actions mentioned at para 6.1(i) to (x) of this Pact also on the Commission by the Bidder(s)/ Contractor(s) or anyone employed by it or acting on its behalf (whether with or without the knowledge of the Bidder(s)/ Contractor(s), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the Principal / Owner to the effect that a breach of the provisions of this Pact has been committed by the Bidder(s)/ Contractor(s) shall be final and conclusive on the Bidder(s)/ Contractor(s). However, the Bidder(s)/ Contractor(s) can approach the Independent Monitor(s) appointed for the purposes of this Pact IEMs shall examine the transgression and its severity and submit the report to Chairman, NDMC for further action after providing an opportunity and hearing to the affected parties. .

#### **7. Fall Clause:- Deleted**

#### **8. Independent Monitors**

8.1 The Principal / Owner has appointed Independent Monitors (hereinafter referred to as IEMs) for this Pact in consultation with the Central Vigilance to as Monitors) for this Pact in consultation with the Central Vigilance Commission names and E-mail IDs have been given in the NIT.

8.2 The task of the IEMs shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

8.3 The IEMs shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

8.4 Both the parties accept that the M IEMs have the right to access all the documents relating to the project/procurement, including minutes of meetings.

8.5 As soon as the IEMs notices, or has reason to believe, a violation of this Pact, he will so inform to Chairman NDMC.

8.6 The BIDDER(s) accepts that the IEMs has the right to access without restriction to all Project documentation of the Principal / Owner including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will also grant the IEMs, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project

documentation. The same is applicable to Subcontractors. The IEMs shall be under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s) /Subcontractor(s) with confidentiality.

8.7 The Principal / Owner will provide to the IEMs sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the IEMs the option to participate in such meetings.

8.8 The IEMs will submit a written report to the Chairman NDMC in the Department/ within 8 to 10 weeks from the date of reference or intimation to him by the Principal / Owner / BIDDER and, should the occasion arise, submit proposals for correcting problematic situations. However an opportunity shall be provided by the IEMs to the buyers/ Bidders before submitting their written report.

## **9. Facilitation of Investigation**

In case of any allegation of violation of any provisions of this Pact or payment of commission, the Principal / Owner or its agencies shall be entitled to examine all the documents including the Books of Accounts of the the Bidder(s)/Contractor(s) and the Bidder(s)/Contractor(s) shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

## **10. Law and Place of Jurisdiction**

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the Principal / Owner.

## **11. Other Legal Actions**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings

## **12. Validity**

12.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 12 month beyond the defects liability period of the contracts. In case Bidder(s)/Contractor(s) is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of

the contract.

12.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The parties hereby sign this Integrity Pact at .....on.....

Principal / Owner

Bidder(s)/Contractor(s)

Name of the Officer

Designation

Deptt./

**New Delhi Municipal Council**

Witness

Witness

1.....

1.....

2.....

2.....

\* Provisions of these clauses would need to be amended/ deleted in line with the policy of the Principal / Owner in regard to involvement of Indian agents of foreign supplier

**Power of Attorney for Lead Member of Consortium**

Whereas the ..... (the "Authority") has invited bids from pre-qualified and short-listed parties for the ..... Project (the "Project").

Whereas, ....., ..... and ..... (collectively the "Consortium") being Members of the Consortium are interested in bidding for the Project in accordance with the terms and conditions of the Request for Proposals and other connected documents in respect of the Project, and

Whereas, it is necessary for the Members of the Consortium to designate one of them as the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's bid for the Project and its execution.

**NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS**

We, ..... having our registered office at ....., M/s. ...., having our registered office at ....., and M/s. ...., having our registered office at ....., (hereinafter collectively referred to as the "Principals") do hereby irrevocably designate, nominate, constitute, appoint and authorise M/s ..... having its registered office at ....., being one of the Members of the Consortium, as the Lead Member and true and lawful attorney of the Consortium (hereinafter referred to as the "Attorney") and hereby irrevocably authorise the Attorney (with power to sub-delegate) to conduct all business for and on behalf of the Consortium and any one of us during the bidding process and, in the event the Consortium is awarded the Concession/ Contract, during the execution of the Project, and in this regard, to do on our behalf and on behalf of the Consortium, all or any of such acts, deeds or things as are necessary or required or incidental to the submission of its bid for the Project, including but not limited to signing and submission of all applications, bids and other documents and writings, accept the Letter of Award, participate in bidders' and other conferences, respond to queries, submit information/ documents, sign and execute contracts and undertakings consequent to acceptance of the bid of the Consortium and generally to represent the Consortium in all its dealings with the Authority, and/ or any other Government Agency or any person, in all matters in connection with or relating to or arising out of the Consortium's bid for the Project and/ or upon award thereof till the Concession Agreement is entered into with the Authority.

AND hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us/ Consortium.

IN WITNESS WHEREOF WE THE PRINCIPALS ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS ..... DAY OF ....., 20....

For .....  
(Signature, Name & Title)

For .....  
(Signature, Name & Title)

For .....  
(Signature, Name & Title)

(Executants)

(To be executed by all the Members of the Consortium)

Witnesses:

- 1.
- 2.

Notes:

- *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*
- *Wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders resolution/ power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.*
- *For a Power of Attorney executed and issued overseas, the document will also have to be legalised by the Indian Embassy and notarised in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalised by the Indian Embassy if it carries a conforming Appostille certificate.*



**Joint Bidding Agreement**

<< To be printed on a stamp paper and signed by Authorized signatories of the Lead Bidder and Consortium members>>

**MEMORANDUM OF UNDERSTANDING.**

This Memorandum of Understanding is made in \_\_\_\_\_ on the \_\_\_<sup>th</sup> Day of \_\_\_\_\_, 20\_\_.

**BY AND BETWEEN**

, \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as The Lead Bidder/ The Lead Consortium Partner)

And

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as 'Consortium Member1') And

**[Name of The Lead Bidder]. [Name of Consortium Member1]**, (which expression shall unless repugnant to the context or meaning thereof mean and indicate its successors in interest and assignees) shall collectively be referred to as 'Members' and individually as "the Member".

**WHEREAS:**

a) \_\_\_\_\_ ('Client') has invited Tender no. \_\_\_\_\_ ('Tender') dated \_\_\_\_\_ for the work of.....

b) The Members wish to enter into this memorandum of understanding in order to establish a framework for their joint efforts in their participation of this Tender and the terms as per which the services would be rendered by the Members in connection with the Project.

**NOW, THEREFORE, THE MEMBERS AGREE AS FOLLOWS:**

1. The Members agree and acknowledge that they have understood the terms and requirements of the tender and this MOU and agree to abide by the terms therein The 'Members' have agreed to work together as a Consortium of Consultants (hereinafter called the "Consortium") and submit a proposal jointly with each Member having specific role(s) as defined hereinafter.
2. [Name of Member] shall be The Lead Bidder/ The Lead Consortium Member ('LCM') of the Consortium and shall represent the Consortium in its dealing with the Client.
3. For the purpose of submission of bid proposal, the Consortium agrees to authorize the LCM to sign, submit and negotiate the entire technical and commercial offer on behalf of the Consortium based on the various cost proposals worked out by the Consortium. The other Member(s) shall provide all the required inputs and co-operation to the Lead Member for submitting the offer and providing all technical, financial and contractual clarifications to the Client in a timely manner. However LCM shall not submit any such application, proposals, documents, clarifications or other commitments before securing the written consent of the other Member(s) of the Consortium.
4. The Members agree that the sole purpose of the Consortium shall be the overall performance of the consultancy services for the Project pursuant to the contract with the Client (in case of being successful bidder) as agreed by the Consortium hereto on one part and Client on the other part ('Client Contract').

5. LCM will provide Tender Fees, Performance Bank Guaranties (including cost of any extensions of such Performance Guarantee) and insurance policies (as called for by the Client). The cost of obtaining such Tender Fees/ Performance Guaranties/ Insurance policies would be shared by all the Members in proportion of their financial share of fee under the Client Contract.
6. The Members will be responsible for their own cost of men, material, equipment, services, taxes, duties, reimbursable etc indicated in their proposals.
7. All common expenses mutually agreed and worked out by Members would be added to above individual Member's cost and will be quoted to the Client in tender document formats along with suitable technical and financial terms and conditions (if any).
8. The Members undertake to fully abide by all the technical, commercial and legal provisions of the Tender document or any other instruction provided by the Client with respect to the Project unless it is duly commented by the Members in the proposal to Client and agreed to by the Client. Each Member of the Consortium shall be responsible for performance on his part and for which the Member shall be separately and directly compensated as agreed between the Members.
9. Joint and Several Liability: The Parties do hereby undertake to be jointly and severally responsible for all obligations and liabilities relating to the Project and in accordance with the terms of the TENDER and the Master Service Agreement, till such time as the Financial Close for the Project is achieved under and in accordance with the Master Service Agreement.
10. The Members will maintain a close coordination between themselves, discuss and agree in writing all alterations, modifications, additions, deletion to their scope of work ( as defined above) duly signed confirming their agreement. Members would cooperate for providing all technical, financial and contractual clarifications to the Client in a timely manner to ensure the success of the Project.
11. Each Member shall assign staff with suitable expertise and experience to undertake his own obligations, responsibilities and scope of services as per Client Contract with the Client.
12. Each Member shall provide necessary support to the Consortium as the need be for due performance of responsibilities of the Consortium.
13. The role assigned to each Member with respect to performance of work under the Client Contract with the Client, or any variation order thereto or extensions shall be mutually determined reflecting the skills of each Member's personnel.
14. Each Member shall individually prepare the invoice for the services rendered in accordance with the terms of the MOU. All invoicing to Client shall be done by the LCM. The payment from Client will be made by the LCM to each Member separately promptly upon receipt of the payment from the Client.
15. This MOU shall not create any form of incorporated joint venture, partnership or other legal entity between the Members nor give rise to any agency one for the other.
16. Shareholding in the Consortium: The Parties agree that the proportion of shareholding among the Parties in the Consortium shall be as follows:  
First Party:  
Second Party:
17. **Assignment And Third Members**
- 17.1 **[Consortium Member1], [Consortium Member2]** and shall co- operate throughout the entire period of this MOU on the basis of exclusivity and shall not make arrangement or enter into agreement either directly or indirectly with any other firm or group of firms on matters relating to the Project except with prior written consent of the other Members.

- 17.2 This MOU shall not be assigned by any Member, in whole or in part, without obtaining the prior written consent of the other Members.
- 18. Submission of Offer:** Each Member shall bear its own cost and expenses for preparation of their offer and subsequent business development expenses till award of the Project. Neither Member shall have power to commit on behalf of the other Member or the Consortium, financial or otherwise, without written consent of the other Member.
- 19. Payments and Tax Liability**
- 19.1 Each Member shall be responsible for salaries, fees, social benefits, insurances, and any other payment due to his personnel or payable on behalf of or for the account of his personnel.
- 19.2 Each Member shall be responsible for payment of personal income tax, corporate tax and any other taxes of whatever nature that may be levied and incurred on each Member in connection with, or as a result of the performance of services required under the TENDER or this MOU.
- 20. Indemnity and Limitation of Liability**
- 20.1 Notwithstanding anything contained in the MOU or the TENDER or the Client Contract, it is mutually agreed to between the Members that a Member shall be liable only for its respective (i) scope of work carried out in accordance with this MOU; (ii) terms and condition in the TENDER and MOU. Hence, the Members shall have several and not joint liability against the Client.
- 20.2 Each Member shall indemnify the other Member for any liability, damage, costs, injury, harm or losses which arises to or suffered by the other Member as a result of (i) any work performed/not performed by such a Member for the Client and the Project; (ii) breach or non-compliance by the Member with the terms of the TENDER under which the work has been awarded to the Consortium (iii) breach or non-compliance with the terms of this MOU.
- 20.3 Each Member's liability to the other in contract or tort or under statute or otherwise for any consequential, special, indirect, incidental, punitive or exemplary damages, costs, expenses or losses (including without limitation, lost profits and opportunity costs) suffered by a Member (or by any such other Member) arising from or in connection with the MOU or Project, however the indirect or consequential economic loss or damage is caused, shall be excluded.
- 21. Documents & Confidentiality**
- 21.1 Each Member retains copyright and all other intellectual property rights in the documents, drawings, data, concepts, information and other materials provided by such Member to the other Member in connection with this MOU (MOU Material) and the Project. The LCM shall have right to use the MOU material for the purpose of the MOU and procuring award of the Client Contract to the Consortium. Neither the LCM nor the other Member may use or make copies of MOU material for any other purpose other than the Project.
- 21.2 Each Member agrees to maintain confidentiality of all matters/information received in connection with this MOU and/or the TENDER/Project.
- 21.3 This restriction for disclosure shall continue to apply even after the expiration or termination of this MOU, but shall cease to apply to information or knowledge, which (i) may properly come into the public domain through no fault of the Member so restricted or (ii) any Member may be forced to disclose under any applicable rule, regulation or law or pursuant to an order of a competent authority whom the disclosing Member is bound to comply or (iii) was or becomes known through independent means or from a third Member which was under no obligation to the unrestricted Member to keep the said information confidential or (iv) which was developed independently by a Member without referring to or relying upon the information disclosed by the other Member.
- 21.4 No Member will make any public announcement about this MOU or the Project unless the other Member given written consent to that announcement.

21.5 NDMC shall be entitled to share Confidential Information with its professional indemnity insurers/advisors in confidence only.

**22. Exclusivity**

22.1 It is hereby agreed that **[Consortium Member1]**, **[Consortium Member2]** and shall ensure that no subsidiary affiliate or associate over which it has actual control will):-

- i) While this MOU subsists or at any time after its termination, offer to perform or perform any of the services or give any assistance or support to any proposal made in connection with the Project, except as part of the Consortium; and
- ii) While this MOU subsists, perform any services in connection with the Project, except as part of the Consortium.
- iii) While this MOU subsists, will not enter into any negotiations or arrangement with any other company or group of companies or person or association of persons for the said Project without the prior written consent of the other Members of the Consortium.

22.2 This MOU shall not preclude any Member from contracting independently of the other on any other project that may be similar in nature to the said Project.

22.3 The Members agree that once the bid has been submitted, it shall not withdraw or deviate, under any circumstances, from the Project or from the allocation of the work as agreed. In the event any Member breaches this obligation, it shall be liable to indemnify the Consortium for all expenses, costs, damages, loss or any liability whatsoever arisen or which may arise by reason of such breach.

**23. Conflict of Interest**

The Members confirm that they are exclusively associated with the Consortium and have no conflicts of interest in relation to the Client (or if there is any, the conflicts have been managed by such Member), the services to be provided, the Project work and other Members of the Consortium.

**24. Governing Law and Arbitration**

24.1 The construction, validity and performance of this MOU shall be governed in all respects by the laws of India.

24.2 Any dispute, controversy or claim arising out of or relating to this MOU shall be settled in the first instance amicably among the Members. If an amicable settlement cannot be reached as above, it will be resolved by Steering Committee consisting of four members, one from each Member to be nominated by the Managing Directors (or equivalent) of the respective companies/firms to resolve the matter within 60 days. In case, a settlement is still not reached the matter shall be referred to Arbitration by a sole arbitrator in accordance with the Indian Arbitration and Conciliation Act 1996 or any amendments thereof. The venue of the arbitration shall be Mumbai. The arbitrator shall be appointed mutually by the Members. The venue for the arbitration shall be Mumbai, India and shall be conducted in the English language. Award of the arbitrator shall be final and binding on all Members to the MOU.

**25. Representations and Warranties**

Each Member represents, warrants and undertakes to the other Members that;

- It is a corporation duly incorporated entity, validly existing and in good standing in the jurisdiction of its incorporation.
- It has full corporate power and authority to enter into this MOU and to perform its obligations hereunder.
- The execution of this MOU has been duly authorized by all necessary and appropriate corporate actions, which will constitute valid and legally enforceable and binding terms and conditions hereof.

**26. Validity, Severability and Entire Understanding**

26.1 This MOU shall come into force from the date of signing and is valid and binding until completion by the Members of their respective obligation under the TENDER.

Notwithstanding the above, the MOU shall automatically expire upon completion of the Project or except as mutually agreed between the Members.

26.2 If any term, clause or provision of this MOU for any reason whatsoever is found to be invalid, illegal or unenforceable by a court of competent jurisdiction such invalidity, illegality or unenforceability shall be deemed severable from the remaining terms, clauses or provisions, and shall in no way affect or impair the validity or legality or enforceability of the remaining terms, clauses or provisions and shall deemed to have been deleted from this MOU.

26.3 This MOU supersedes all the previous MOU/ Letter/Correspondence for the subject matter between the Members before signing of this MOU.

**27. Amendments**

Any amendments to the MOU shall be in writing with mutual consent of the Members.

**28. Force Majeure**

28.1 Any delay in or failure by any Member in his performance hereunder shall be excused if and to the extent caused by occurrences beyond the Member's reasonable control and without fault or negligence by such Member and which condition was not foreseeable by such Member at the time this MOU was entered into and could not have been prevented by such Member's taking reasonable steps however not beyond to the extent excused under the Client Contract.

28.2 Such conditions shall be limited to the conditions qualifying as Force Majeure in the contract but shall exclude delays or failures caused by failure to provide staff or inadequacy of their performance in accordance with the contract or as otherwise mutually agreed.

28.3 The Member claiming to be affected by any such events shall, as soon as reasonably practicable, give prompt notice to the other Members, specifying the full particulars thereof and the Members shall agree what action, if any, shall be taken.

**29. Notices**

Notices shall be given in writing by fax confirmed by registered mail or commercial courier to the following fax numbers and addresses.

Members		Other Member	

IN WITNESS WHEREOF THE MEMBERS, have executed this MOU the day, month and year first before written.

Name:

Designation:

Duly authorized on behalf of

[Name of Entity]:

Date

Stamp

Name: Designation:

Duly authorized on behalf of

[Name of Entity]:

Date  
Stamp

Name: Designation:  
Duly authorized on behalf of  
[Name of Entity]:  
Date  
Stamp

Name: Designation:  
Duly authorized on behalf of  
[Name of Entity]:  
Date  
Stamp

Notes:

The mode of the execution of the Joint Bidding Agreement should be in accordance with the procedure, if any, laid down by the Applicable Law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.

Each Joint Bidding Agreement should attach a copy of the extract of the charter documents and documents such as resolution / power of attorney in favour of the person executing this Agreement for the delegation of power and authority to execute this Agreement on behalf of the Consortium Member.

For a Joint Bidding Agreement executed and issued overseas, the document shall be legalised by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney has been executed.

**Undertaking by Bidder**

To,

The Executive Engineer,  
New Delhi Municipal Council  
Palika Kendra, New Delhi-110001

**Project: Supplying & Laying underground 11 KV Cable of Size 400 Sq mm. and L.T cables of Various Sizes in NDMC area**

We confirm that our company <\_\_\_\_\_> as on date of the Submission of bid for Supplying & Laying underground 11 KV Cable of Size 400 Sq mm. and L.T cables of Various Sizes in NDMC area has not been suspended from business dealings and/or debarred and/or charge sheeted by central agencies, Power utilities/State Utility/Central utility/Central PSU/State PSU/National/International Funding Agencies in any assignment/Project/contract at any stage including bidding stage in last three (3) years as on date of submission of bid.

I agree that NDMC may reject my bid and take suitable action against us, if our firm is found suspended from business dealings or debarred or charge sheeted by central agencies, Power utilities/State Utility/Central utility/Central PSU/State PSU/National/International Funding Agencies in any assignment/Project/contract at any stage including bidding stage for this tender.

Sincerely,  
(Signature of the Authorized Signatory of the bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:

## **Cable laying work**

### **Laying of L.T/H.T cables of all sizes.**

1. The Cable laying work shall conform generally to specification as per IS 1255 latest edition and also according to Indian Electricity Rules.
2. For one cable, the trench shall be 1.10 mts. deep for the 11 KV grade cables. The trench shall not be less than 0.30 mtrs. Wide. If more than one cable length is to be accommodated in the same trench under individual brick tiles, the width shall be increased by 23 cm for such extra run of cable. Where it is not possible to excavate specified deep due to unavoidable circumstances and accepted subject to the approval of the Executive Engineer In charge, proportionate deduction will be made from the contractor on this account.
3. Where one LT cable upto 95Sq. mm is to be laid in a trench, the trench shall be excavated 0.90 mts. Deep and not less than 0.30 mts. Wide. Above 95 Sq.mm the depth of trench shall be 1.10 mts. deep If, however, more than one LT cables are to be laid in the same trench under individual brick tiles, width of the trench shall be increased by 23 cm for each extra cable. Where it is not possible to excavate 0.90 mts. Deep due to unavoidable circumstances, the trench shall be excavated to the maximum possible depth and accepted subject to the approval by the Executive Engineer In charge. Proportionate deduction will be made from the contractor on this account.
4. The trench shall be excavated with a uniform cross section through out with its angles and sides square and in accordance as per the above specifications unless directed by the Engineer In charge. Where the cables are to be laid in a straight run and the trench shall be excavated in a well defined straight line and where it is necessary to divert the cable to run them in a curvature, the trench shall be excavated in an arc with a defined radius as per specifications below. Cables where laid along road berms shall run parallel to the centerline of the road. Where gradients and change in the depth are unavoidable these shall be gradual.
5. Where the cables have to be diverted, the curvature of the bends shall have a radius not less than twice the diameter of the cable drum or 20 times the diameter of the cable whichever is greater of the two.
6. The distance of the centerline of the trench from the curve or the road berm of any cable shall be decided by the Engineer In charge or his authorized representative.
7. For excavating a trench, route shall be taken between the feeding and receiving end. Route shall be decided by the engineer In charge or his authorized representative. To ensure that cable is laid in a well defined manner, the contractor shall excavate inspection pits not less than the depth of the trench to be excavated and spacing not more than 20 meter so that straight route free from existing services is followed.
8. After excavation of the trench, the trench shall then be provided with a layer of clean, dry, sand cushion of not less than 8 cm in depth before laying the cables



therein. The cable laid in trenches in single tier formation shall have a covering of dry sand of not less than 17 cm above. The base cushion of sand before the protected cover is laid, so that the total sand of cushioning is 25 cm. The cable should run in the center of their rectangular cross section of the sand cushioning. The sand should then be lightly rammed and the brick tiles put over the top of the sand cushioning, making one solid and continuous strip of the brick tiles. Extra care should be taken to ensure that no gaps are left between the two consecutive brick tiles. If only one cable is laid in a trench, covering of 23 cm width of brick tiles should be sufficient. For each additional cable length in the same trench, the width of the brick tile covering shall be increased by 23 cm.

9. The sand used in the cushioning for cable shall be free from any hard substance such as stones, pieces of broken bricks, pebbles, etc.
10. The brick tiles Class 'B' used in covering the cables in the trench shall be fully burnt in proper shape and in one piece. Broken brick tiles or parts thereof shall not be used in covering the cables.
11. As required by the Engineer In charge or his authorized representative, cable loops shall be left for connection up to panels, pillars, road light poles, etc.
12. All cables before laying shall be tested with a 500 V megger for cables of 1.1 KV grade or with a 2500/5000V megger for cables above 1.1 KV grade. The cable cores tested for continuity absence of cross phasing, insulation, and resistance from conductors of earth/Armour and between conductors. The contractor shall provide the megger results after completing the cable laying works.
13. The road cut should be properly filled up with material excavated from there that should be suitably rammed and compacted so that there is no hindrance to traffic and also follow all the instructions as per the road cut permission obtained from the department/other authorities.

Bidder scope shall be limited to road cutting, back filling stacking and compaction of excavated area using excavated material only. However restoration of road/ Site to desired condition shall be done by the NDMC

14. The empty cable drum shall be retained by the contractor and on account of this Recovery @Rs1000/- for each empty drum of L.T cables size above 95 Sq.mm 3.5 C & empty cable drum of all sizes of H.T Cable and Rs 500/- for each empty drum of L.T cable size upto 95 Sqmm. shall be deducted from contractor bill.
15. Proper barricade should be done at the time of execution of work to avoid any accident/mishappening.

## **SPECIAL CONDITIONS**

1. License: -The firm should possess a valid contractor's license to execute electrical works.
2. Execution of Contract: - The successful tenderer shall have to execute a contract if called upon to do so by the Council within seven days of the receipt of such notice and the names of the authorized representatives of the contractor who would be responsible for taking instructions from the Engineer In charge. In case the tenderer fails to execute the contract, the tender is liable for rejection and the amount of E.M. deposited shall be forfeited.
3. Validity of Contract: - The contract will be valid for two years from the date of award.
4. Power to vary or omit work: - The length & size of the cables and total amount of the tender listed in the schedule are only approximate and the Council does not bind itself to those quantities which are only tentative estimates of the value of work. It may be noted that cables of size/length different to the ones listed in schedule have to be laid/dismantled. There might be additions to the quantities against some of the items and reduction in the quantities against others or no work may have to be carried out against some other items. The payment shall be made only for the extent of the work that is actually carried out and measured.
5. Guarantee Period: - Guarantee period shall be twelve months from the date of completion mentioned in the work.
6. Refund of Security: - Security will be refunded after guarantee period of twelve months from the date of completion of works under this contract.
7. Storage, Watch & ward: - The contractor shall make his own arrangements for watch & ward of the cables/other materials, dismantled from sites, till such time the work is completed and handed over to the Engineer In charge of the work and the surplus dismantled cables/other materials are returned to Store.
8. Arrangement of Labour: - It is essential on the part of the contractor to engage adequate labour so as to cope up with the cable laying/dismantling works allotted to them for various sites. To ensure this they will be required to submit weekly report to EE(IPDS) in respect of the No. of workers engaged by them on each day along with the details of deployment of labour on each of the work allotted to them.
9. Tool and Plants: - the contractor at his own cost shall provide all tools and plants for the transportation of cable drums. However, an obligatory, if the wheel and axle set is available with the Department, the same shall be provided to the contractor at the suitable rent fixed by the department. In case of non-availability, the contractor shall make his arrangements for wheel & axle set and the work will not be withheld on this account.
10. Extra payment for extra cable laid in the same trench: - The rates for road cut have been worked out for laying, dismantling of one cable only. If more than one cable is laid in the same trench under separate layer of brick tiles, road cut charges as applicable will be paid separately for all such cables.
11. Schedule of Rates: - The rates worked out in the schedule are inclusive of cartage and supply of the requisite materials and cartage of the cables where necessary besides labour charges for carrying out the works. Same rates shall hold good irrespective of whether the cable is laid in a trench in accordance with specifications, or in a case inside a building where excavation of trench is not necessary. For carrying out the works in later

- cases, wall/floor shall have to be cut and made good by the contractor without any extra charges.
12. In case of mishappening or damages to the utilities, during the cable laying work, the contractor shall be held responsible to make good the same at his own cost. Further, if any major damages is caused due to mishandling/ non observance of precautions, the contractor can also be resigned without assigning any reason, besides forfeiture of his Performance Guarantee/Security deposit and also black listed.
  13. Same type of make and model of individual electrical equipment shall be used for entire project.
  14. For masonry work the contractor shall arrange water at his own cost nothing shall be paid extra on this account. Free electricity will be provided for execution of work only.
  15. The minor items which are not included in the Bid document but essentially required for successful completion of work shall be deemed included nothing extra shall be paid on this account.
  16. The computerised M.B shall be used for make running payment/Final payment as per the provision contain in the CPWD work manual 2014.
  17. It is the responsibility of contractor to obtain permission form Delhi traffic police for plying vehicle in NDMC area for cartage of material, however a letter shall be issued to the contractor by Engineer-in-charge for getting permission from Delhi traffic police.
  18. The Contractor will dismantle those H.T & L.T cables which are lying in open trench/Duct and cables exposed to open environment. The Contractor will cartage the pieces of cables dismantle during laying of L.T & H.T Cables to NDMC store or any other site in NDMC area free of cost. Nothing shall be paid extra on this account.
  19. It is the duty of contractor to provide security for watch-n-ward of the new as well as dismantled Cables. In case of theft, the contractor will lodge FIR in nearest Police Station. In case of theft of material, the contractor shall provide new material to complete the work without any delay.
  20. For Safety of material against fire & theft at site, the contractor will execute insurance policy.
  21. The contractor will submit separate performance guarantee for heat shrinkable straight through joint and end – termination Kits equal to 5 % of quoted rate after completion of whole project against heat shrinkable straight through joint and end – termination Kits. The Performance guarantee against tendered amount will only be release after submission of separate performance guarantee for joints & End – Terminations.
  22. The completion period of whole Project is 24 months from the **10<sup>th</sup> day of notification of Award letter.**
  23. a) The routine test shall be conducted from NABL accredited lab for each lot of the cable before raising inspection call. The same shall be produced to the employer during inspection of particular Lot of cable.  
b) The manufacturing company of LT and HT cable should have ISO 9001 & ISO 1400 I certifications. True copy of ISO certifications issued to the manufacturing firm shall be submitted in the bid by bidder.
  24. **The details of quantity and location of cables given in the bid document are tentative information. The contractor shall take approval from Engineer – in- charge before laying cables.**

- 25. If the bidder quoted different rates for similar items, payment to the contractor will be given on the basis of lowest quoted rate.**

### **GENERAL CONDITIONS**

1. The Supply of Cable shall be handed over to NDMC at the stores or other places in NDMC for carrying out insulation test before laying of the cable. The contractor will then, if necessary, unroll the cable for measurement, rewind it on the drum and cart it to the site of work. He will then lay the required length of cable and return the balance to the Stores or other places in New Delhi. He will when required to do so, unroll this balance cable for measurement and rewind it on the drum. No extra amount shall be paid for this work.
2. The contractor should exercise care in handling the cable and avoid forming the 'Kinks". The cable drum should invariably be conveyed on the wheels and axle set strong enough to carry weight of the drum and pull by means of ropes. Alternatively they may be mounted on trailer or on a suitable mechanical transport that will be arranged by the contractor himself and the cable should be unrolled in right direction indicated on the drum by the manufacturers.
3. When cables have to be diverted, the trench will have to be excavated in such a way that the bend in the cable is as per IS Specifications.
4. After cable is laid, it will be tested by the Engineer In charge or his staff and should yield approximately the same results as the one made at the Stores or other places in New Delhi.
5. In case lawns are to be cut, it should be done to the entire satisfaction of the Engineer In charge or his authorized representatives and in such a way that the turf removed can be re-laid.
6. Filling of trenches shall be done with excavated earth free from stones or other sharp edged debris only after the sand cushioning and laying brick tiles is carried out to the satisfaction of the Engineer In charge or his representative, unless otherwise specified. The crown of the earth not less than 50 mm and maximum 100 mm in the center and tapering towards sides of the trenches shall be made.
7. When commencing work, the materials should be collected for minimum possible time at places that are put to way and could not give any unsightly appearance. After completion, all the left over material should be removed without leaving any unsightly patches. If this condition is not fulfilled, the Chief Engineer or his authorized representative may get the work done through other agency or departmentally without prior notice and recover the cost from the contractor.
8. Brick/tiles/stone tiles, recovered, if any, during the dismantling of cables done by the contractor, shall become his property. He will be allowed to use the brick tiles recovered in the laying of HT & LT cable provided they are in good condition and as per our specifications.
9. Generally, the size of the trenches to be excavated for laying of cable shall be in accordance with the specification laid down by the Engineer In charge or his authorized representative and at his discretion can amend the specifications in respect of the size of the trench and the amount of

- cushioning to be provided .The Engineer In charge or his authorized representative shall direct as to which of the cable length to be laid in the same trench and which in separate trenches.
- 10.If any damage is done to any other services due to operation of the contractor, the whole cost of making good such damages shall be recovered from him and where such amount to be a breach of the terms of this contract, the Chief Engineer may at his discretion cancel this contract and declare the contractor to be irresponsible and he shall not be re-employed in future for a specified period or permanently.
  - 11.The contractor himself will make arrangements of drinking water for the labour working at site.
  - 12.Extra amount shall be paid for cutting of the road, road berms, and approach roads of building/pucca floors/metalled/concrete if necessary for carrying out the works specified in this contract.
  - 13.The contractor shall supply sand and tiles to cover the joints and loops without any extra charges.
  - 14.There exists a lot of underground LT/HT telegraph cable and pipe lines in the New Delhi area. The contractor will have to exercise great care in excavating trenches where there is doubt; a reference should immediately be made to the engineer In charge of the work. If any damage is done, the cost of making good such damages or entire replacement of cable etc. if found necessary shall be recoverable from the contractor.
  - 15.The Executive Engineer will depute his Assistant. Engineers/Jr. Engineers or any other subordinate authority on his behalf for day to day supervision of the work. The instructions issued by such officer should be faithfully carried out. This does not however, take the right of Ex. Engineer or Superintending Engineer or the Chief Engineer to order rectification of any technical fault committed in the execution of any technical work and nothing extra will be payable to the contractor for such rectification.
  - 16.The contractor will be responsible for making suitable arrangements to complete the work within the scheduled time and he must maintain adequate progress as per requirement of Department from time to time. If the contractor fails to show reasonable progress, the Chief Engineer shall have the power and authority under the Contract to resort any of the following measures for expediting the completion of work:
  - 17.The work can be got executed through any other agency and additional cost of the work, if any, shall be recovered from the contractor.
  - 18.The contractor's tender can be rescinded and his Earnest Money forfeited. In the event of any dispute arising on this point, the decision of the Chairperson, NDMC shall be final and fully binding.
  - 19.No trench or holes should be left unprotected in the open stage at any time and for any length of time without completing the job, refilling them in a satisfactory manner is a must.
  - 20.No trench or holes should be dug until the contractor is certain that the cable is available for laying in it.
  - 21.Before starting any cable laying work, written road cut permission must be obtained from the concerned Executive Engineer (Electric). Whenever a road is required to be cut, the contractor must give proper intimation about the intended time of road cut to the concerned Ex. Engineer (Elect.) so that the concerned Civil Enquiry is informed to undertake the road repair work promptly. The contractor shall also fill up all the cuts made on roads, service roads, road berms, pucca floor, approach roads of building etc. with material excavated immediately after the RCC pipes have been laid and

- suitably compact it so that there is no hindrance to the traffic. All surplus materials should be immediately removed. No extra amount will be paid for filling road, compacting the filling material and removing surplus material and its stacking at proper place without any hindrance to traffic or otherwise.
22. Where trenches are left open overnight and where roads are being cut in the day or night, the contractor shall exhibit suitable danger signals such as banners, red flags and red lamps at their own cost. Where the road is required to be closed for traffic, the road-closed board in English as well as Hindi of approved design shall be suitably displayed.
  23. **The cable trench shall be barricaded properly with M.S. sheet barricading of minimum height of 4 feet along the length of the road berm. This is required for the safety of the traffic and the pedestrians. The tenderer shall be responsible for any mishap which may occur on account of its not taking necessary precautionary measures. The sheet, shall be fixed at sites by them before starting the work. The cost of the barricading shall not be paid extra. Required information regarding work as specified shall be written on these barricading sheets.**
  24. The contractor has to abide by the conditions of code of conduct for road cutting. Any violation of code of instructions issued by Authorities can entail fine to the contractor up to Rs 5000/- against individual work orders besides other actions as deemed fit in accordance with the instructions issued from time to time.
  25. **Detection/scanning of the existing underground utility services shall be in the scope of work and the contractor has to submit Ground Penetrating Radar Survey (GPRS) Report for feasibility with respect to proposed route plan for road cutting to lay their service. The report shall be certified by Authorized Signatory and self explanatory, showing feasibility with respect to proposed depth of trenchless cutting through HDD (Horizontal Directional Drilling) Method of Standard Trenchless Technology as well as for open cutting before carrying out the work.**
  26. The contractor shall provide at his own cost the cautionary sign boards of approved design having name of the concerned XEN with his Telephone nos. at regular intervals all along the trenches, excavations and particularly at intersections and road crossing where trench excavation are in progress. The cautionary illuminated signboards, blinking lights are to be provided while working at night. These can be connected to the nearest street light pole.
  27. Restoration should be perfect including watering, compacting and removal of surplus earth to be stacked behind footpath or in lane after every 50 mtrs. (Approx.). Material should not be stacked on footpath. The contractor shall make arrangement of water at his own cost.
  28. At a stretch digging of trench should not be more than 250 mtrs. long. After restoration of dug out trench, further digging of trench shall be carried out.
  29. No extra payment shall be made for dismantling the cable at an abnormally more depth.
  30. The NDMC shall provide suitable space for storage of cable, if available, free of cost. The electricity shall be provided for security purpose on chargeable basis for which the contractor shall get sanctioned the temporary electric connection.

## Scope of work

1. Excavation of Trench
2. Carriages of cable from the Council's Stores or other places in New Delhi to site of work and return of unused cable to Store or other places in New Delhi.
3. Supplying & providing of Yamuna Sand both above and below the cable to be laid in trenches.
4. Supplying and laying of fully burnt Class 'B' brick tiles (even in shape & size) over the cables after it is laid, filling of trenches and dressing properly.
5. Filling of road cuts with the material dismantled from there and compacting.
6. During laying of cable, in day time extra earth / malba shall be stacked at proper place at regular intervals of about 50 mtr. (Approx.). To clear the site, extra malba/ earth shall be lifted in Night for disposed in dumping ground
7. Return of the dismantled cables to Stores which are not to be re-laid and rolling the dismantled cable on cable drum after measurement at site store/Main store or as desired by the Engineer In charge.
8. Laying of cable in soft soil.
9. Laying of cable in hard soil.
10. Laying of cable in rocky soil.
11. Laying of new or old cables in the same trenches where cables have been dismantled.
12. Dismantling & relaying of cables along with same road berms or at the same site which shall be required in cases where it becomes necessary to shift the cables a few meter from the existing run in soft/hard/rocky soil.
13. Laying of more than one cable in the same trench under individual brick tiles in soft/hard/rocky soil.
14. Dismantling of cables. Handling of all sorts of cables that are not necessarily laid in the Ground but part of it is going up the pole and part of it in the building or the pillars. This also includes the laying of cables in the open ducts.
15. Drawing of cables in the existing duct or subway.
16. Cutting of (bituminized/concrete) surface of:
  - Main Road
  - Service Road/approach roads of building/pucca floor
  - Road berms
17. Excavation of soft/hard/rocky soil earth including filling and dressing. Rates may be quoted for a unit of cubic meter.
18. **The rate for excavation of earth including filling, watering and restoring site to its original condition shall remain same for H.T & L.T Cable.**

## Deductions

1. After laying the cable and dressing up of trench, the contractor shall remove malba/surplus earth and stack at regular intervals at a distance of 50 mtrs. (Approx.). In case the malba/surplus earth is not removed

within the stipulated completion time, the same shall be got removed at the risk & cost of the firm and the penalty as per various Clauses /conditions of the N.I.T. /other authorities will be imposed. Nothing extra on account of this shall be paid to the contractor.

2. In case the cable is laid in the open duct only handling charges shall be allowed.
3. The empty cable drum shall be retained by the contractor and the cost of each empty cable drum @ Rs 500/- up to 95 sqmm cable and Rs 1000/- above 95 sqmm cable shall be deducted from the bills of the contractor.
4. Necessary permission for plying trucks for cartage of cable, laying material, cable has to be applied by the firm well in time so that the same is obtained from Traffic Department of Delhi Police without any further loss of time. The delay, if any, on this account will be on the part of the Contractor.
5. Generally, the work is to be carried out in NDMC area. However, in case the work is to be got done outside NDMC area, the rates shall remain the same and no extra payment shall be made for executing the work outside NDMC area.
6. The contractor shall make his own arrangement for motorized mode of transport for carting the material in NDMC area as cycle rickshaw/hand carts are banned in NDMC area.
7. During the course of cable laying works or during the carting of material such as cables, cable drums, , sand, brick tiles etc., if any accident occurs (major/minor) no compensation will be paid by the NDMC. It shall be on the part of the contractor only.
8. The laying of HDPE pipes should be done with the trench less machines. In case the machine is found to have not been used by the contractor a recovery of @50% shall be; made for the portion/item as per scheduled of Quantities/rates.
9. Recovery on account of less depth shall be done at the rate quoted by contractor at serial no. 12 (a), 12(b) of part – B and 11(a), 11(b) of part-C



## **Inspection**

1. The contractor shall deposit four copies of cable route plan on paper with Compact Disk (CD) for soft copy, indicating the exact position of the cable its cable joints, manufacturing and year of cable laying, name of agency and name & designation of the checking/inspection of the officers.

## **Special Conditions for laying of HDPE Pipes**

1. The bidder may hire HDD (horizontal directional drilling) machine. During execution of work, if any damage occurred to any service over and underground due to machine, the penalty charges shall be recovered from the lead bidder.
2. The length of the pipe and total amount of the tender listed in the Schedule are only Approximate and the Council does not bind itself to these quantities which are only tentative estimates of the value of the work.
3. The contractor shall use only ISI marked, PN4 class HDPE pipes manufactured with thickness and material grade PESO as per IS:4984:95 and up to latest amendment thereof.
4. The contractor shall use only ISI marked HDPE pipes during the course of execution of work.
5. During the course of execution of work, if any accident occurs (major/minor), no compensation will be paid by the NDMC and shall be on the part of the contractor only.
6. The Engineer In charge will decide the location of laying HDPE pipes
7. Since the pipes will be laid in VIP roads, the traffic permission to bring the machines will be obtained by the contractor.
8. The earthing pit to lay the pipes will be dug and refilled by the contractor. The extra earth will also be removed and disposed off by the contractor.
9. The ends of the pipes shall be temporarily closed after laying the pipes.
10. The sketch showing the locations of the pipes shall be supplied in Triplicate to enable the Department to plan the cable routes accordingly.
11. Detection/scanning of the existing underground utility services should be done before carrying out the work.
12. The contractor may be asked to lay the pipes at short notice because of security reasons in VIP areas.
13. The rejected/damaged/surplus pipes shall be taken back by the contractor, nothing extra shall be paid for such material.
14. The depth of the pipes will be decided by the Engineer In charge depending upon the capacity and size of the cables.
15. After laying the HDPE pipe, 4 mm dia 3 strands polypropylene rope of ordinary grade (as per IS: 5175-1987) shall be crossed and left inside the pipe for drawing out the cable free of cost.
16. In case the HDPE pipe is got laid well in advance and at the time of crossing the cable at some later stage, the cable does not cross through the pipe due to one reason or the other, either the Contractor shall get crossed the cable from the pipe or shall lay another HDPE pipe of the same size at his own cost.
17. After laying the pipe, the contractor shall carry out the cleaning and rodding of pipe and perform Mandrel Test. No extra payment shall be made for this.
18. The measurement of HDPE pipe laid across the road shall be taken as per the actual site requirement and shall not be more than one meter additional at both ends of the road.
19. 50% recovery shall be on account of laying of HDPE Pipe if laid through open cut.
20. For trenchless work, contractor must use latest technology trenchless machine including sensor device.

# **PAYMENT TERMS**

## **A. Progressive payments (Against Quoted Price of Supply of Cables):**

**1. First Installment (70%):** Seventy percent (70%) payments against delivery of material at site. After submission of following Certificate:-

- a. Manufacturer's copy of challan.
- b. Certified copy of Insurance policy/Insurance Certificate.
- c. Manufacturer's/Contractor's guarantee certificate of Quality.

**2. Second Installment (20%):** Twenty percent (20%) payments against laying of H.T & L.T Cable.

**3. Third Installment (10%):** Ten percent (10%) payments against submission of the certificate by the Contractor that the cables have been laid, tested and commissioned successfully

## **B. Progressive payments (Against Quoted Price of laying of H.T & L.T Cable):**

**1. First Installment (90%):** Ninety percent (90%) payments against laying of H.T & L.T cables.

**2. Second Installment (10%):** Ten percent (10%) payments against submission of the certificate by the Contractor that the cables have been laid tested and commissioned successfully.

Note:- In case of consortium all the payment shall be disbursed to lead partner.

## **C. Deduction of WCT and Labour Cess:**

WCT and Labour Cess shall be deducted as per prevailing rates only on cable laying work from the each running bill and final bill (**Part B and Part C of price schedule**).

## **D. Deduction of Income Tax and other statutory Taxes:**

Income tax and other statutory taxes shall be deducted as per prevailing rate from the Gross amount of each running bill and final bill.

## **11 kV Grade H.T XLPE Insulated Cables**

### **1.0 SCOPE:**

This section covers the standard technical requirements of design, manufacturing, testing, packing and dispatching of 11 kV XLPE HT Power Cable.

### **2.0 APPLICABLE STANDARDS**

The materials shall conform to the latest editions of the following Indian/International Standards :

IS 7098 Part 2 : 1985 XLPE insulated PVC sheathed cables For working voltages from 3.3 kV up to and including 33 kV

IS 5831 : 1984 PVC Insulation and Sheath of electric Cables

IS 8130:1984 Conductors for insulated electric cables and flexible cords.  
IS 613:1984 Copper rods and bars for electrical purposes.

IS 3975:1988 Mild steel wires, formed and tapes for armouring of cable.  
IS 10810:1984 Method of tests for cables.

IEEE-383:1974 Standard for type test of class IE electric cables, field splices, and connections for nuclear power generating stations.

ASTM-D2843,1993 Standard test method for density of smoke from burning or decomposition of plastics.

ASTM-D2863, 1991 Standard test method for measuring minimum oxygen concentration to support candle - like combustion of plastics (oxygen index).

NEMA-WC5,1992 Thermoplastic Insulated Wire and cable for the transmission and distribution of Electrical Energy.

IEC:754 Test on gases evolved during combustion of electric cables -

(Part-1):1994 Determination of the amount of halogen acid gas evolved during combustion of polymeric materials taken from cables.

IEC:332 Test on electric cables under fire conditions

(Part I):1993 Test on a single vertical insulated wire or cable. IS 3961 Recommended current rating for cables -

(Part II):1967 PVC insulated and PVC sheathed heavy duty cables.

IS 10418:1982 Drums for electric cables.

### 3.0 GENERAL REQUIREMENTS

All cables shall be suitable for high ambient, high humid tropical Indian Climatic conditions. Cables shall be designed to withstand the mechanical, electrical and thermal stresses under the unforeseen steady state and transient conditions and shall be suitable for proposed method of installation.

Conductor shall be of uniform, of good quality, free from defects Aluminum. Insulation shall be Cross Linked Polyethylene (XLPE) .

For 11 kV cables, conductor screen and insulation screen shall both be extruded, semi-conducting compound and shall be applied along-with XLPE insulation in a single operation by triple extrusion process. Method of curing for 11 kV cables shall be "Dry curing/ gas curing / Steam curing".

Extruded Semi-conducting screening and metallic screening of copper tape shall be generally as per IS 7098 (Part-II) with latest amendments. The semi conducting compound shall be suitable for the operating temperature of the cable and compatible with the insulating material.

The insulation screen shall be an extruded layer of black semi-conducting compound and continuously covers the whole area of insulation. The semi-conducting screens should be effectively cross linked to achieve 90 ° C cable rating. The contact surface between insulation and insulation screen shall be smooth and free from protrusion and irregularities.

The interface between insulation and insulation screen shall be free of any voids. Insulation screen shall be strippable type.

The metallic screen shall consist of a layer of copper cable applied in helical form.

Inner sheath - All armoured and multi-core un-armoured cables shall have distinct extruded inner PVC sheath of black colour.

Armouring For Multicore cable it shall be GS flat. Armouring shall be as per relevant IS and it shall have minimum 90% coverage.

Breaking Load of the joints shall be minimum 95% of the normal armour.

Outer Sheath – It shall be of black colour PVC (type ST2 as per IS 5831) with Cable size and Voltage grade embossed/printing on it.

Sequential marking shall be at every 1 (one) Meter distance.. Word "XLPE NDMC-2017" shall also embossed/printing on it at every 1(one) m distance

FR Properties - All cable shall be Flame Retardant,

Minimum bending radius shall be as per relevant IS.

Repaired cables shall not be acceptable.

The Manufacturer shall furnish a complete and detailed quality plan for the manufacturing process of the cable. All raw materials shall conform to relevant applicable standards and tested for compliance to quality and requirement. During the manufacturing process, at all stages, inspections shall be made to check the physical and dimensional parameters, for verification to compliance to the standards. The Manufacturer shall arrange, for inspection by the purchaser, during manufacture with one month advance notice for verifying the various stage inspections as specified in the quality assurance plan enclosed to verify the quality control process of the Manufacturer.

#### **4.0 CURRENT RATING OF CABLES**

- 1) Normal current rating shall not be less than that covered by IS 3961. Vendor shall submit data in respect of all cables in the prescribed format.
- 2) Tables given de-rating factors for various conditions of cable installation including the following, for all types of cables shall be furnished.
  - Variation in ambient air temperature. - Variation in ground temperature.
  - Depth of laying.
  - Cables laid in the ground - Cables laid in trench
  - Cables laid in ducts - Soil resistivity.
  - Grouping of cables.
- 3) The value of short circuit withstand current ratings of all cables shall be indicated for a short circuit for 1 second duration and should also specify the maximum temperature during short circuit.
- 4) The following factors shall also be accounted for, while specifying the maximum short circuit withstand of the cables.
- 5) Deformation of the insulation, due to thermo-mechanical forces produced by the short circuit conditions, can reduce the effective thickness of insulation.
- 6) Conductor and core screens can be adversely affected with loss of screening effect. Likewise the thermal properties of the outer sheath material can be the limitation.
- 7) It is essential that the accessories which are used in the cable system with mechanical and/or soldered connections are suitable for the temperature adopted for the cables.
- 8) Formula for calculating short circuit current for different duration or curve showing short time current v/s time for different sizes of cables shall be furnished by vendor.

#### **5.0 CABLE DRUMS**

- 5.1 Cables shall be supplied in non-returnable wooden drums of heavy

construction and drum shall be properly seasoned, sound and free from defects. Wood preservative shall be applied to the entire drum.

- 5.2 All Power Cables shall be supplied in drum length of 500 m. Each drum shall contain one continuous length of cable. Owner shall have the option of rejecting cable drums with shorter lengths. The cable length per drum is allowed a tolerance of  $\pm 5\%$ . The total quantity variation of length shall not be more than  $\pm 2\%$

Where the ordered quantity is not multiple of 500 m, as the case may be, and the incremental quantity is very small, the same may be included in one of the drums. Otherwise, an additional length for the incremental quantity will be supplied.

- 5.3 Non-Standard length above 100 m shall be accepted upto a limit of 5 % of the ordered quantity.
- 5.4 A layer of water proof paper shall be applied to the surface of the drums and over the outer most cable layer.
- 5.5 A clear space of at least 40mm shall be left between the cables and the logging.
- 5.6 Each drum shall carry manufacturer's name, purchaser's name, address and contract number, item number and type, size and length of the cable, net and gross weight stenciled on both sides of drum. A tag containing the same information shall be attached to the leading end of the cable. An arrow and suitable accompanying wordings shall be marked on one end of the reel indicating the direction in which it should be rolled.
- 5.7 Packing shall be sturdy and adequate to protect the cables, from any injury due to mishandling or other conditions encountered during transportation, handling and storage. Both cable ends shall be sealed with PVC/Rubber caps so as to eliminate ingress of water during transportation and erection.
- 5.8 The cable shall be marked with size , "XLPE NDMC – 2017" and with sequential marking at every meter

## 6.0 TESTS

- 6.1 Type Tests **(For type test, certificates from CPRI / ERDA Testing Laboratories for 11 kV XLPE cable shall be submitted along with purchase order. The type test should have been conducted not later than five years on the date of supply)**

The following shall constitute type tests:

- i) Tests on conductor
  - a. Annealing test (for copper)
  - b. Tensile tests (for aluminum)
  - c. Wrapping tests (for aluminum)
  - d. Resistance test

- ii) Tests for armouring wires/strips
- iii) Test for thickness of insulation and sheath
- iv) Physical tests for insulation
  - a. Tensile strength and elongation at break
  - b. Ageing in air oven
  - c. Hot test
  - d. Shrinkage test
  - e. Water absorption (gravimetric)
- v) Physical tests for out sheath
  - a. Tensile strength and elongation at break
  - b. Ageing in air oven
  - c. Hot test
  - d. Shrinkage test
- vi) Bleeding and blooming tests (for outer sheath)
- vii) Partial discharge test
- viii) Bending test
- ix) Dielectric power factor test
  - a. As a function of voltage
  - b. As a function of temperature
- x) Insulation resistance (volume receptivity) tests
- xi) Heating cycle test
- xii) Impulse withstand test
- xiii) High voltage test
- xiv) Flammability test

## 6.2 Acceptance tests

The following shall constitute acceptance tests:

- a. Annealing test (for copper)
- b. Tensile test (for aluminum)
- c. Wrapping tests (for aluminum)
- d. Conductor resistance test,
- e. Test for thickness of insulation



- f. Hot set test for insulation,
- g. Tensile strength and elongation at break test for insulation and sheath
- h. Partial discharge test (for screened cables only)
- i. High voltage test and
- j. Insulation resistance (volume resistivity) test

### 6.3 Routine test

The following shall constitute routine tests:

- i) Conductor resistance test
- ii) Partial discharge test (for screened cables only) and
- iii) High voltage tests.

### 6.4 Optional tests

Cold impact tests for outer sheath (IS:5831-1984) shall constitute the optional tests.

## SPECIFIC TECHNICAL REQUIREMENTS AND QUANTITIES.

### 1.0 SCOPE

This section of the specification covers project information, site condition, desired Technical parameters and quantity of XLPE Cable.

#### 1.1 Project Information

- a. Customer :
- b. Engineer/Consultant :
- c. Project Location :
- d. Transport facilities
  - i) Nearest Railway station : /Gauge
  - ii) Distance from site :
- e. Access Roads :

#### 1.2 SITE CONDITIONS

- (i) Ambient air temp. (max.) °C :
- (ii) Ambient air temp. (min.) °C :
- (iii) Design ambient temp. °C :

1.2.1 Relative humidity for design : purposes

1.2.2 Height above mean sea level in : meters

1.2.3 Earth quake data

3 Seismic zone : IS:1893-84

4 Seismic acceleration : As per IS 2.2.4

5

1.2.4 Wind data

Site Wind Pressure  $\text{Kgf/m}^2$  : As per IS 2.3

1.3 System Particulars

a.	Line Voltage (kV)	11
b.	Highest System Voltage (kV)	12
c.	Number of Circuits	1
d.	Frequency	50 Hz
e.	Neutral	effectively earthed
f.	Short circuit level (KA)	18.4 kA

1.4 **SPECIFIC TECHNICAL REQUIREMENTS**

Technical Parameters of the cable shall be as follows:

S. No.	PARTICULAR	Unit	DATA
1.	Type of Cable		A2XFY
2.	Rated Voltage	kV	11
3.	Type of Insulation	-	XLPE
4.	Single core/ Multi core	-	Three core
5.	Armoured / Unarmoured	-	Armoured
6.	Material of Conductor	-	Aluminum
7.	System	-	11 kV Earthed
8.	Highest System Voltage	kV	12
9.	Conductor size	sq. mm	400
10.	Material		Stranded Aluminium
11.	Shape of Conductor		Circular
12.	Short Circuit Current	kA	18.35 for 3 secs.
13.	Power Frequency Withstand Voltage	KV rms	28
14.	Lightning Impulse Withstand Voltage	kVp	75
15.	Continuous Withstand Temperature	Deg C	90
16.	Short Circuit withstand Temperature	Deg C	250
17.	Oxygen Index		Min 29 (as per ASTM D 2863)
18.	Acid Gas Generation		Max 20% ( as per IEC 754-1)
19.	Smoke Density Generation		60% (As per ASTM D 2843)
20.	Flammability Test		As per Swedish Chimney test

## GUARANTEED TECHNICAL PARTICULARS

Sl. No.	Item Particulars	Unit
1	Manufacturers Name & Address	
2	Country of manufacturer	
3	Type of cable	
4	Applicable standards for manufacturing	
5	Applicable standards for testing	
6	Rated voltage	kV
7	Maximum service voltage	kV
8	Maximum continuous current carrying capacity per cable when laid in air at an ambient air temperature of 50 deg. (single core cables solid bonded)	A
9	Maximum continuous current carrying capacity per cable when laid in ground at a depth of 1.0 m (ground temp. 40 deg. C and soil thermal resistivity of 150 deg.c/watt/cm max. Conductor temp. 90 deg. C) (single core cables solid bonded)	A
10	Maximum continuous current carrying capacity per cable when drawing into duct./pipes (single core cables solid bonded)	A
11	Maximum continuous current carrying capacity per cable when laid in covered RCC trenches at an ambient temperature of 50 Deg. C laying conditions to be specified (Single core cables solid bonded)	A
12	Short circuit withstand capacities for 1 second of (With a conductor temperature of 90 Deg. C at the commencement	
i)	Conductor	KA
ii)	Screen	KA
iii)	Armour	KA
13	Conductor	
i)	Material & Grade	
ii)	Nominal cross – sectional area	sq.mm
iii)	No. of strands	
iv)	Diameter of each strand (Nominal)	mm
v)	Max. DC resistance of conductor at 20 Deg. C	ohm/km
vi)	Max. AC resistance of conductor at 90 Deg. C	ohm/km
14	Reactance of cable at normal frequency (Approx)	ohm/km
15	Electrostatic capacitance at normal frequency	microrfarads per km
16	Charging current	
17	Loss tangent at normal frequency at U <sub>0</sub>	
18	Conductor screen	
i)	Material	
ii)	Nominal thickness	mm
19	XLPE Insulation	
i)	Composition	

ii)	Type of curing	
iii)	Thickness of insulation (nominal)	mm
iv)	Tolerance on thickness	mm
v)	Dielectric constant at normal frequency	
vi)	Specific insulation resistance at 20 deg. C	ohm/km
vii)	Min. Volume resistivity at 20 deg. C	
viii)	Min. volume resistivity at 90 deg. C	
ix)	Min. Tensile strength	kg/sq.cm
x)	Min. Elongation percentage at rupture	%
xi)	Identification of cores	
20	1.2/50 microsecond impulse wave withstand voltage	kVp
21	5 min. power frequency withstand voltage	kV
22	Max. Dielectric stress at the conductor	kV/cm
23	Max. Dielectric stress at the conductor screen	kV/cm
24	Insulation screen	
i)	Material	
ii)	Extruded/wrapped	
iii)	Nominal thickness	mm
iv)	Colour	
25	Metallic screen	
i)	Material / composition	
ii)	Nominal radial thickness / dia	
26	Nominal diameter over metallic screen	mm
27	Nominal radial clearance allowed under metal sheath	mm
28	Type and material of filler	
29	Armour	
i)	Material and type	
ii)	Dia	

## 1.1 kV grade LT XLPE insulated cable for all sizes

### 1.0 SCOPE:

1.1 The scope of this specification covers the design, manufacture inspection and testing the finished ISI marked 1100 volts, stranded, compact aluminum conductor, with XLPE insulated, PVC inner sheathed, galvanized steel strip armored/unarmoured and overall PVC sheathed Black colour cable conforming to IS:7098 /88 with latest amendments and as per specification detailed.

### 2.0 RATED VOLTAGE:

2.1 The rated voltage of the cable shall be 1100 Volts AC with the highest system voltage of 1100 Volts between phases of the effectively earthed three-phase transmission system.

2.2 The cables shall be capable of operating continuously under the system frequency variation of  $\pm 3$  Hz, voltage variation of  $\pm 10\%$  and a combined frequency – voltage variation of  $\pm 10\%$ .

### 3.0 APPLICABLE STANDARDS:

- (i) Unless otherwise stipulated in the specifications, the latest version of the following Standards shall be applicable:  
IS 7098 (Part 2)-Cross-linked Polyethylene insulation for Cables.  
IS 8130-Conductors for insulated electrical cables and flexible cords.  
IS 10810(series)-Methods of tests for cables.  
IS 10418-Drums for electric cables.  
IS 3975-Specification for mild steel wires, strips and tapes for armoring of cables.  
IS 5831-Specification for PVC insulation sheath for electric cables.  
IS 10462-Fictitious calculation method for determination of dimensions of protective coverings of cables Part 1 - Elastomeric and thermoplastic insulated cables.
- (ii) The cables manufactured to any other International Standards like BSS, IEC or equivalent standards not less stringent than Indian Standards are also acceptable. In such cases the Manufacturer shall enclose a copy of the equivalent international standard, in English language.

### 4.0 CONSTRUCTION:

4.1 **Conductor:** - The cable conductor shall be made from stranded aluminium to form compact sector shaped conductor having resistance within the limits specified in IS:8130/1984 and any amendment thereof. The wires shall be laid up together with a suitable right hand lay. Stranded Class 2 – as per the

IS:8 130 / IEC 60228/ BS 6360 standards.

**4.2 Insulation:** - The insulation shall be cross linked polyethylene applied by extrusion and shall be steam (wet) cured as pre IS:7098(1)1988 and curing in hot water tank/bath is not accepted.:

Sl.No.	Properties	Requirements
1.	Tensile Strength	12.5N/mm <sup>2</sup> , Min.
2.	Elongation to break	200 percent, Min
3.	Aging in air oven: a) Treatment: Temperature: Duration: b) Tensile Strength variation: c) Elongation variation:	135±3°C 7 days ±25 percent, Max ±25 percent, Max
4.	Hot set: a) Treatment: Temperature: Time under load Mechanical stress b) Elongation under load Permanent elongation (set) after c) cooling	200±3°C 15 min 20N/cm <sup>2</sup> 175 percent, Max 15 percent, Max
5.	Shrinkage: a) Treatment: Temperature Duration b) Shrinkage	130±3°C 1 hour 4 percent, Max
6.	Water absorption (Gravimetric): a) Treatment: Temperature: Duration b) Water absorbed	85±2°C 14 days 1 mg/cm <sup>2</sup> , Max
7.	Volume Resistivity a) at 27°C b) at 90°C	1x10 <sup>14</sup> ohm-cm, Min 1x10 <sup>13</sup> ohm-cm, Min
8	Thermal Resistivity	350 degrees C cm/W
9	Power factor at maximum conductor temperature	0.008
10	Dielectric strength	22 kV/mm

**4.3.1** The XLPE insulation should be suitable for specified 1.1 KV system voltage.

**4.3.2** The manufacturing process shall ensure that insulations shall be free from voids.

**4.3.3** The insulation shall withstand mechanical and thermal stresses under steady

state and transient operating conditions.

**4.3.4** The insulation of the cable shall be high stranded quality, specified in IS:7098 (Part-II/1985). Withstand continuous conductor temperature of 90 deg C, which means higher continuous rated current carrying capacity.

**4.3.5** The cables can operate even at conductor temperature of 130 deg C continuously and 250 deg C during a Short Circuit condition

**4.4 SHEATH :**

The sheath shall be suitable to withstand the site conditions and the desired temperature. It should be of adequate thickness, consistent quality and free from all defects. The PVC sheath shall be extruded as per IS:7098 (Part – I/1988).

**4.5 ARMOUR :**

Armoring shall be applied over the inner sheath with single galvanized steel complying with the requirements of IS:3975/1979. The dimensions of the galvanized strip shall be as specified in table 4 of the IS:7098/Part-I/1988. The armour wire shall be applied as closely as practicable. The direction of the lay of the armour shall be left hand. The joints in armour wire shall be made by brazing or welding and the surface irregularities shall be removed. A joint in any wire shall be at least 300mm from the nearest joint in any other armour wire in the complete cable and shall be as per IS:7098 Part 1, IS: 3975.

**4.6 OUTER SHEATH:** Extruded PVC ST2, outer sheath as per IS:5831/1984, IS:7098Part 1 shall be applied over armoring with suitable additives to prevent attack by rodents and termites. Outer sheathing shall be designed to offer high degree of mechanical protection and shall also be heat, oils, chemicals, abrasion and weather resistant. Common acids, alkalis, saline solutions etc., shall not have adverse effects on the PVC sheathing material used. All cable shall be flame retardant (FR).

**4.7** The cables should be suitable for use in solidly earthed system.

**4.8** The power cables shall be manufactured to the highest quality, best workmanship with scientific material management and quality control. The Manufacturer shall furnish the quality plan, giving in detail the quality control procedure / management system.

**4.9** The cable shall be suitable for laying in covered trenches and/or buried underground to meet the outdoor application purposes.

**4.10** The parameters of the LT power cables to be supplied shall be as specified below



Nom. cross sectional area (Sq.mm)	Nom. Thickness of XLPE Insulation mm main core	Armoured			Max.DC Conductor Resistance at 20°C (ohm/km)	AC current rating	
		Nom. Steel Armour size (mm)	Approx. Overall dia. (mm)	Approx. Weight (kg/km)		In air (amps)	In Grpund (amps)
16	---	----	----	----	-----	----	-----
25	0.90	4 X 0.8	22.8	821.0	1.200	95	97
50	1.00	4 X 0.8	28.1	1195.0	0.641	140	134
95	1.10	4 X 0.8	35.8	1903.0	0.320	221	199
185	1.60	4 X 0.8	47.5	3276.0	0.164	339	287
300	1.80	4 X 0.8	58.4	4872.0	0.100	461	375
400	2.00	4 X 0.8	65.6	6101.0	0.0778	542	426

4.11 The short circuit current of the LT cable to be as specified below

sq.mm of LT Cable	Short Circuit Current(KA)
16	As per IS
25	2.420
50	4.790
95	9.030
185	17.500
300	28.200
400	37.600

## 5.0 SYSTEM DETAILS:

### General Technical particulars

Nominal system voltage (rms) (U)	0.44KV
Highest system voltage (rms) (U <sub>m</sub> )	1.1 KV
Number of Phase	3
Frequency	50Hz
Variation in Frequency	+/- 3%
Type of Earthing	Solidly Earthed
Total relay & circuit breaker Operating time	15 – 20 cycles

## 6.0 CLIMATIC CONDITIONS:

- (a) Maximum ambient air temperature (in shade) 45<sup>0</sup> C  
Maximum ambient air temperature (under
- (b) sun) 50<sup>0</sup> C
- (c) Maximum daily average ambient air 35<sup>0</sup> C

	temperature	
	Maximum yearly average ambient air	
(d)	temperature	30 <sup>0</sup> C
(e)	Maximum humidity	100%
(f)	Altitude above M.S.L.	Up to 1000M
	Average No. of thunder storm days per	
(g)	annum	50
(h)	Average No. of dust storm days per annum	Occasional
(i)	Average No. of rainy days / annum	90
(j)	Average Annual Rain fall	925mm
(k)	Normal tropical monsoon period	4 months
		150/Sq.
(l)	Maximum wind pressure	M

## 7.0 **DESIGN CRITERIA:**

- i. The cables that are covered in these specifications are intended for use outdoor , under the climatic conditions and installation conditions described in the technical specification.
- ii. For continuous operation of the cables, at specified rating, the maximum conductor temperature shall be limited to the permissible value as per the relevant standard, generally not exceeding 90°C under normal operation and 250°C under short – circuit conditions.
- iii. The cables in service will be subject to daily load cycles, of two peaks during a day; morning peak and evening peak, with around 25% to 50% loading during the nights.
- iv. The materials used for outer sheaths shall be resistant to oils, acids and alkalis.
- v. The cables shall have the mechanical strength required, during handling and laying.
- vi. The cables shall be designed to withstand the thermo-mechanical forces and electrical stresses during normal operation and transient conditions.
- vii. The cables shall be designed to have a minimum useful life span of Thirty-five years.
- viii. The detailed design drawings shall be submitted along with Purchase order.

## 8.0 **MANUFACTURE PROCESS:**

Cross-linking of the insulation materials (pre compounded polyethylene) shall be conforming to IS: 7098 (Part – II) and the proof of purchase of the above insulating material shall be submitted and is to be offered for stage inspection.

## 9.0 **MATERIALS:**

- 9.1 **Conductor:** -The conductor shall be of stranded construction. The material

for conductor shall consist of the plain aluminum of H2 or H4 grade as per clause – 3 of IS 8130/ 1984.

9.2 The minimum number of wires for all cables shall be as per table – 2 of IS 8130/ 1984.

**10.0 CORE IDENTIFICATION:**

10.1. The core identification for 31/2 core cables shall be provided, by suitable means, like, by application of individual colour or colored stripes, or by numerals or by printing on the cores as per clause 13 of IS: 7098 - Part 2

10.2. For identification of different coloring of XLPE Insulation, or by using colored strips, red, yellow and blue colors respectively shall be used to identify the phase conductors.

**11.0 LAYING UP OF CORES:**

The cores shall be laid together with a suitable right hand lay. The interstices at the center shall be filled with a non- hygroscopic material.

**12.0 INNER SHEATH (COMMON COVERING):**

12.1 The laid up cores shall be provided with inner sheath applied by extrusion. It shall be ensured that the shape is as circular as possible. The inner sheath shall be so applied that it fits closely on the laid up cores and it shall be possible to remove it without damage to the insulation.

12.2 The thickness of the inner sheath (common covering) shall be given as follows:

CALCULATED DIAMETER IN MM OVER LAID UP CORES [REF IS 10462 (PART 1)]		THICKNESS OF INNER SHEATH (Min) mm
Over	Up to and including	
—	25	0.3
25	35	0.4
35	45	0.5
45	55	0.6
55	—	0.7

12.3 When one or more layers of binder tapes are applied over the laid up cores, the thickness of such tapes shall not be construed as a part of inner sheath.

**13.0 ARMOURING:**

13.1 Armouring shall be single strip steel wire applied over the inner sheath as closely as practicable. The direction of the lay of the armour shall be left hand.

13.2 The armour shall consist of galvanized strip steel The dimensions of the galvanized steel wires shall be 4 X 0.8 mm (Nominal)

13.3 The joints in the armour strip shall be made by brazing or welding and the

surface irregularities shall be removed. A joint in the wire shall be at least 300-mm from the nearest joint in any other wire in the complete cable.

- 13.4 Manufacturers shall furnish the calculation / data sheet for the short circuit carrying capability of the Armour.

#### **14.0 OUTER SHEATH:**

- 14.1 The outer sheath shall be applied by extrusion. It shall be applied over the armouring shall consist of poly-vinyl chloride (PVC) compound, conforming to the requirements of type ST-2 of IS 5831. Suitable additives shall be added to give anti termite protection.
- 14.2 The minimum thickness of the PVC outer sheath shall be as per IS:10462 and as detailed.

<b>Calculated diameter under the outer sheath [IS 10462 Part 1] – mm</b>		<b>Minimum thickness of the outer sheath (ts) - mm</b>
<b>Over</b>	<b>Up to and including</b>	
----	15	1.24
15	25	1.40
25	35	1.56
35	40	1.72
40	45	1.88
45	50	2.04
50	55	2.20
55	60	2.36
60	65	2.52
65	70	2.68
70	75	2.84
75	----	3.0

#### **14.3 IDENTIFICATION:**

The outer sheath shall have the following information embossed or indented on it; ISI marking, the manufacturer's name or trade mark, the voltage grade, the year of manufacture and Name of Employer" The identification shall repeat every meter along the length of the cable. Outer sheath of cable shall be black in permanent colour.

#### **15.0 INSPECTION AND QUALITY CONTROL:**

The Manufacturer shall furnish a complete and detailed quality plan for the manufacturing process of the cable. All raw materials shall conform to relevant applicable standards and tested for compliance to quality and requirement. During the manufacturing process, at all stages, inspections shall be made to check the physical and dimensional parameters, for verification to compliance to the standards. The Manufacturer shall arrange, for inspection by the purchaser, during manufacture with one month advance notice for verifying the various stage inspections as specified in the quality assurance plan enclosed to verify the quality control process of the Manufacturer.

## 16.0 TYPE TESTS:

Type test certificates from CPRI/ ERDA Testing Laboratories for 1.1 kV XLPE, shall be submitted along with Purchase order. The Type Tests should have been conducted not later than 5 years as on the date of supply.

- 16.1 Stage wise Inspection: The Manufacturer shall offer the stage wise inspection as per quality assurance plan.
- 16.2 All acceptance tests shall be conducted in the presence of the Employer's representative.
- 16.3 The supplier shall give 10 days advance notice for inspections, and witnessing of tests by the Employer representative.
- 16.4 The following type tests shall be conducted on the cable.

Sl. No.	Test	Requirement	Test method Ref Part no of IS: 10810
a)	Tests on conductor i) Tensile test ii) Wrapping test iii) Resistance test	IS:8130 IS:8130 IS:8130	2 3 4
b)	Tests for armoured wires and strips	Clause 15.2 & IS:3975	36 to 42
c)	Test for thickness of insulation and Sheath	Clause 4.3, 14.2 & 16.2	6
d)	Physical tests for insulation: i) Tensile strength and elongation at Break ii) Aging in air oven iii) Hot test iv) Shrinkage test v) Water absorption (gravimetric)	Clause 4.2	7 11 30 12 33
e)	Physical tests for outer sheath i) Tensile strength and elongation at Break ii) Aging in air oven iii) Shrinkage test iv) Hot deformation	IS: 5831	7 11 12 15
f)	High voltage test	Clause 22.7	45
g)	Flammability test	Clause 22.8	53

## **17.0 ACCEPTANCE TEST:**

- 17.1 The sampling plan for acceptance test shall be as per IS 7098 part –I
- 17.2 The following shall constitute the acceptance test.
- a. Tensile test for aluminum.
  - b. Wrapping test for aluminum.
  - c. Conductor resistance test.
  - d. Test for thickness of insulation.
    - (i) Test for thickness of inner and outer sheath.
    - (ii) Hot-set test for insulation.
    - (iii) Tensile strength and elongation at break test for insulation and outer sheath.
    - (iv) High voltage test.
    - (v) Insulation resistance (volume resistivity) test.

## **18.0 ROUTINE TEST:**

The following shall constitute routine tests:

- Conductor resistance test.
- High voltage test.

## **19.0 DETAILS OF TESTS:**

- 19.1 Unless otherwise mentioned in this specification, the tests shall be carried out in accordance with appropriate part of IS: 10810.
- 19.2 High Voltage Test at room temperature:  
The cables shall withstand a voltage of 3KV AC (rms) at a frequency of 40 to 60 Hz or an AC voltage of 7.2kV , between conductors and between conductors and ECC ( if any) for a period of 5 minutes each test connection.
- 19.3 Flammability test: Period of burning after removal of the flame shall not exceed 60 seconds and the unaffected (uncharred) portion from the lower edge of the top clamp shall be at least 50-mm.

Employer reserves the right to select a random sample of 1.1 kV UG cable from the Manufacturer's end which are ready to dispatch and also ongoing cable laying works and the same samples will be sent to any testing laboratory as desired by Employer. If the testing results are found to be not satisfactory Employer reserves the right to reject the entire batch of cable received and insists for replacement of material free of cost. The decision of Employer in this regard is final.

## **20.0 PACKING:**

- 20.1 The cables, as per specified delivery lengths, shall be securely wound /packed in non-returnable wooden drums, capable of withstanding rough handling during transport by Rail, Road, etc. The packing should withstand storage conditions in open yards. The cable drums shall conform to IS 10418-1982 or equivalent standard. The dimensional drawings of wooden drums shall be furnished with the Purchase order. The drum shall be provided with

circumferential lagging of strong wooden planks. The end of the cable shall be sealed with good quality heat shrink sealing caps. The sufficiently required additional sealing caps shall be supplied for use of testing during laying and jointing at site and to seal spare lengths of cable. The packing should be able to withstand the rigorous of transport. The following information in bold letters in English shall be painted on the flanges.

- a. Name & Address of the manufacturer, Trade name/Trade mark/Brand
- b. ISI Marking
- c. Size of cable (Cross section) rated voltage, standard, insulation, cable code, drum No., and year of manufacture.
- d. Length of cables (Meters)
- e. Direction of rolling
  - i) Net weight (in Kg)
  - ii) Gross weight (in Kg)
  - iii) Owners purchase order reference.

#### **21.0 SEALING OF CABLE ENDS ON DRUMS:**

- 21.1 The cable ends shall be sealed properly so that ingress of moisture is completely prevented. The individual core endings shall be sealed effectively with water resistant compound applied over the core and provided with a heat shrinkable or push-on or Tapex or cold shrinkable type cap of sufficient length with adequate cushion space so that the conductor does not puncture the cap in case of movement of the core during unwinding or laying. Before sealing, the semi conducting layer on the cores may be removed for about 2 mm at each end, to facilitate checking the insulation resistance from one end, without removing the sealing cap at the other end.
- 21.2 The three cores should have an overall heat shrinkable or push-on or Tapex or cold shrinkable type cap with adequate end clearance, and sufficient cushioning to prevent puncturing of the overall sealing cap due to stretching of the cores. The sealing cap shall have sufficient mechanical strength and shall prevent ingress of moisture into the cable. The ends of single core cables shall also be sealed on the same lines to prevent entry of moisture.

#### **22.0 CABLE LENGTHS:**

The all LT power cables shall be supplied in drum length of 500 m with  $\pm$  tolerance of 5% in each drum. The cable shall be on the wooden drums only. The total quantity of variation of length shall not be more than  $\pm$  2%.

#### **23.0 QUANTITY TOLERANCE:**

The total quantity variation of length shall not be more than  $\pm$  2% for each sized cable.

#### **24.0 MARKING:**

- 24.1 The packed cable drum shall carry the following information, clearly painted or stenciled.
  - a. Name of Employer

- b. Reference to Standard and ISI mark.
- c. Manufacturer's Name or trade mark.
- d. Type of cable & voltage grade.
- e. Number of cores.
- f. Nominal cross- sectional area of conductor.
- g. Cable code.
- h. Length of cable on the drum.
- i. Direction of rotation.
- j. Gross weight.
- k. Country of Manufacture.
- l. Year of Manufacture.
- m. Purchase order and date.
- n. Address of consignee.

24.2 The cable shall be marked with size , "XLPE NDMC – 2017" and with sequential marking at every meter

**25.0 GUARANTEED TECHNICAL PARTICULARS:**

The manufacturer, shall furnish the guaranteed technical particulars of the cable offered in the GTP format provided.

**26.0 DRAWING & LITERATURE:**

(i) The following shall be furnished along with the tender

Cross sectional drawings of the cables, giving dimensional details.  
An illustrated literature on the cable, giving technical information, on current ratings, cable constants, short circuit ratings, de rating factors for different types of installation, packing date, weights and other relevant information.

**27.0** The Manufacturer shall furnish a copy of valid BIS license for ISI marking without which the cable shall not be accepted.

**GUARANTEED TECHNICAL PARTICULARS FOR 1.1 KV**

	<b>Manufacturer's Name</b>		
	<b>Class of Power Cable</b>		
1	Name of the Manufacturer and country of origin		
2	Country of Manufacture		
3	Type of cable / cable code		
4	Applicable standard		
5	Voltage		
	a. Rated Nominal voltage		
	b) Rated Maximum voltage		
6	Suitability for :		



	a. Earthed system		
7	<b>Conductor</b>		
	a) Nominal cross section (sq.mm)		
	b) Material		
	c) Shape		
	d) Diameter of conductor (mm)		
	e) Number of wires per conductor (Nos.)		
8	f) Nominal diameter of wire in conductor (mm)		
	<b>Insulation XLPE</b>		
	a) Curing process (furnish details separately)		
	b) Material/Composition		
	c) Dia over insulation		
	i. Nominal (mm)		
	ii. Average (mm)		
iii. Minimum (mm)			
9	<b>Inner sheath</b>		
	a) Type / composition		
	b) Material		
	d) Tolerance on thickness		
	e) Diameter of cable over sheath (mm)		
10	<b>Armouring</b>		
	a) Material		
	b) Dia of wire		
	Nom. (mm)		
Min. (mm)			
11	<b>Outer sheath</b>		
	a) Type / composition		
	b) Material		
	c) Nominal thickness		
	d) Tolerance on thickness		
	e) Diameter of cable over sheath (mm)		
12	<b>Anti-thermite treatment to outer sheath</b>		
	a) Material		
	External overall dia of cable Short circuit rating of conductor 90 deg. C operating temperature for 1 Sec.		
13	Minimum cable bending radius (in terms of cable diameter)		
14	Permissible maximum tension		
15	Continuous current rating under specified insulation conditions at conductor temperature		

	of 65 deg. C and 90 deg. C.		
16	Ground Temperature 30 deg. C		
17	Thermal resistivity of soil 150 deg. C CM/W		
18	Depth of laying 200 mm		
19	Ambient Air temperature 40 deg. C		
20	No. of circuits 1 OR 2		
21	Spacing between two circuits		
22	Formation		
23	Maximum permissible conductor temperature for continuous operation under specified installation conditions (deg. C)		
24	Conductor temperature at rated current (deg. C)		
25	Basic impulse level at conductor temperature of 90 deg. C (KV)		
26	Impulse wave shape		
27	Power frequency with stand voltage (KV)		
28	Tan Delta at 50 Hz (at U.KV and 90 (-5/+10) deg. C		
29	Sheath voltage at max. load		
30	Withstand voltage of sheath on spark test		
31	Permissible short circuit current ratings of conductor		
	i) 0.1 Sec KA		
	ii) 0.2 Sec KA		
	iii) 0.5 Sec KA		
32	iv) 1.0 Sec KA		
	<b>Conductor resistance DC &amp; AC</b>		
	a) at 20 deg. C (d.c)/A.C. ohm/KM		
	b) at 90 deg. C (d.c)/A.C. ohm/KM		
33	c) at 105 deg. C (d.c)/A.C. ohm/KM over load temp) a.c. (ohm)		
	<b>Equivalent star resistance at 50 Hz of 3 phase current</b>		
	a) at 20 deg. C (d.c)/A.C. ohm/KM		
	b) at 90 deg. C (d.c)/A.C. ohm/KM		
	c) at 10% continuous overload temperature (ohm/KM)		

	<b>Star reactance at 50 hz (ohm/KM)</b>		
34	Approximate impedance at 50 hz per KM		
	a. at 20 deg. C ohm/KM		
	b. at 90 deg. C ohm/KM		
	c. at 10% continuous overload temperature (ohm/KM)		
35	Self-electrostatic capacitance per phase (Micro farad/KM)		
36	Maximum power factor at charging KVA of cables when laid direct in ground at normal voltage & frequency		
	a) at ambient Temperature		
	b) at Maximum conductor Temperature		
37	<b>Impedance</b>		
	a) Positive and negative sequence impedance (ohm/KM)		
	b) Zero sequence impedance (ohm/KM)		
	c) Zero sequence data		
38	<b>Series reactance / Resistance</b>		
	a) Series resistance (ohm/KM)		
	Series reactance (ohm/KM)		
	Shunt capacitive reactance (ohm/KM)		
39	Sheath resistance at 20 deg. C ohm/KM		
40	Surge impedance of cable (ohm/KM)		
41	IR value at ambient temperature per KM		
	Maximum magnitude of partial discharge at 1.5 U.o		
	At Ambient Temperature (Po)		
	At High Temperature (Po)		
	Losses per Km.		
	NOTE : (i) Cable Conductor size 400 sq. mm		
	a) Total 3 phase dielectric loss		

	i. One circuit alive Kw/KM		
	ii. Both circuits alive KW/KM on each circuit		
	b) Total 3 phase resistive loss		
	i. One circuit alive Kw/KM		
	ii. Both circuits alive KW/KM on each circuit		
	c) Total 3 phase sheath / screen loss		
	i. One circuit alive Kw/KM		
	ii. Both circuits alive load KW/KM on each circuit		
42	d) Other losses due to reinforcement		
43	One circuit alive KW/KM		
	Both circuits alive KW/KM on each circuit		
	Total losses		
44	i. One circuit alive KW/KM		
	ii. Both circuits alive KW/KM		
	Charging current at rated voltage per Km (Amps)		
45	Short circuit capacity of conductor for one second at 90 deg. C prior to short circuit and 250 deg. C during short circuit (KA)		
	Screening factor of cable for calculating interference on control and communication cables :		
46	Approximate value of attenuation of carrier current signals operating over a frequency range		
	i. 50 KC/s- dB/KM		
	ii. 100 KC/s- dB/KM		
	iii. 150 KC/s- dB/KM		
	iv. 200 KC/s- dB/KM		
	<b>Shipping weight and size of cable drum</b>		
	a) Size of Drum		
47	i. Dia of Drum (M)		
	ii. Width of Drum (M)		
	iii. Gross Weight (Kgs)		
	iv. Length of cable per Drum(M)		
	v. Weight of Cable (Kg/M)		

### Current Rating Factor

Particulars	Single Point Bonded		Both End Bonded	
	65 deg. C Amps	90 deg C Amps.	65 deg. C Amps	90 deg. C Amps
Current Rating conductor size 400 Sq. mm				
a) In Ground				
i. Of each circuits (when both the circuits alive)				
b) In Duct				
i. Of each circuits (when both the circuits alive)				
ii. Of one circuits (when other circuit is isolated)				
c) In pipe, one cable per pipe.				
i. Of each circuits (when both the circuits alive)				
ii. Of one circuits (when other circuit is isolated)				
d) In Air				
i. Of each circuits (when both the circuits alive)				
ii. Of one circuits (when other circuit is isolated)				

### Derating Factors

<b>1. VARIATION IN GROUND TEMPERATURE :</b>							
Ground Temperature (deg. C) :	15	20	25	30	35	40	45
Rating Factor							
<b>2. VARIATION IN DEPTH OF LAYING :</b>							
Depth of Laying (Meters):	0.7	0.9	1.0	1.2	1.3	1.5	
Rating Factor							
<b>3. VARIATION IN THERMAL RESISTIVITY OF SOIL</b>							
Thermal Resistivity of Soil : (deg. C cm/watt)	100	120	150.0	200	250		
Rating Factor							
<b>4. VARIATION IN AIR TEMPERATURE :</b>							
Air Temperature (deg. C) :	25	30	35	40	45	50	55
Rating Factor							
<b>5. VARIATION DISTANCE (MM) :</b>							
Axial Distance (mm) Between circuits :	100	200	300.0	400	600	800	
Rating Factor							

## ANNEXURE - D

### SPECIFICATIONS OF H.S. TYPE JOINTING KITS

End termination / Straight Through cable jointing kits suitable for H.T & L.T XLPE/PILCA cable should be H.S. type which shall be type tested as per relevant IS standards with up to date amendment from CPRI / NABL accredited lab at the time of bidding. The bidder is required to submit sample along with Model no. and make of the cable jointing kits offered. All the kits should be in sealed condition complete in all respect as prelist mentioned in the packing. The making of joint in all respect will be the responsibility of the bidder and he shall provide all the consumables etc. required at his own cost.

Eligible makes - The manufacturing company of H.S type jointing and termination kits should have ISO 9001 & ISO14001 certifications. True copy of ISO certifications issued to the manufacturing firm shall be submitted in the bid by bidder.

#### NOTE

- The jointing kits should be guaranteed for five years against any manufacturing defects/failure from the date of completion of project and in case of failure it should be replaced free of cost by the firm.
- All routine and acceptance test prescribed in relevant IS for HOPE pipe shall be conducted at the manufacturer works before dispatch of each lot of HOPE pipe. For this purpose the contractor /lead partner shall give fifteen days advance notice for inspection. NDMC shall bear expenses for inspection, but all the cost on account of conducting test shall be borne by the contractor.
- If material fails during inspection, all the expenses of the failed inspection as well as subsequent inspections thereof shall be borne by the contractor.

# **Details and Location of H.T & L.T Cables to be laid**



## Details of 11 KV cables of Maintenance North and South Division.

S. No.	Circle	From	To	Size of Cable	Type of Cable	Length in Mtr.
1	M/N	BSNL	20 Ashoka Road	150 Sq.mm/3C	PILCA	944.3
2	M/N	S/S No. 3 (Old)	Hansalya	300 Sq.mm/3C	PILCA	1132
3	M/N	S/S No. 3 (Old)	Kerala House	300 Sq.mm/3C	PILCA	780
4	M/N	S/S No, III (O)	USS Janpath Lane	0.25 sq.in	PILCA	850
5	M/N	S/S No. 3 (New)	Shastri Bhawan	0.20"/3C	PILCA	1204
6	M/N	S/S No. 3 (New)	Scindia House - II	300 Sq.mm/3C	PILCA	975
7	M/N	S/S No. 3 (New)	Krishi Bhawan	300 Sq.mm/3C	PILCA	1129
8	M/N	S/S No. 3 (New)	Shastri Bhawan	300 Sq.mm/3C	PILCA	1204
9	M/N	S/S TRC	Kidwai Bhawan	300 Sq.mm/3C	PILCA	505
10	M/N	S/S J. Point	Todarmal Lane	300 Sq.mm/3C	PILCA	204
11	M/N	S/S J. Point	Pump Hous via Lady irwin college	0.250"/3C	PILCA	1400
12	M/N	S/S J. Point	Ficci	70 Sq.mm/3C	PILCA	645
13	M/N	S/S Asha Deep	24 Feroz Shah Road	70 Sq.mm/3C	PILCA	683
14	M/N	S/S Asha Deep	Parkash Deep	150 Sq.mm/3C	PILCA	600
15	M/N	S/S Asha Deep	Rohit House	150 Sq.mm/3C	PILCA	500
16	M/N	S/S Asha Deep	25 B.K. Rd.	70 Sq.mm/3C	PILCA	500
17	M/N	S/S No.6	C -II Flat Tilak Marg No. 1	0.250"/3C	PILCA	1032
18	M/N	S/S 2 -4 Rafi Marg	Red Cross (Chelmesh Ford Club)	25 sq.mm/3C	PILCA	360
19	M/N	S/S 2 -4 Rafi Marg	C.N.I Building	0.250"/3C	PILCA	364
20	M/N	S/S 2 -4 Rafi Marg	I.N.S via Reserve Bank	120 sq.mm/3C	XLPE	272

21	M/N	S/S 2 -4 Rafi Marg	bBaird Lane	300 Sq.mm/3C	XLPE	1815
22	M/N	Patiala House	NSCI club cable 2	70 Sq.mm/3C	PILCA	525
23	M/N	Patiala House	NSCI club cable 2	70 Sq.mm/3C	PILCA	525
24	M/N	S/S Shastri Bhawan	North Block CPWD	0.250"/3C	PILCA	1415
25	M/N	S/S Shastri Bhawan	S/S I.A.C	0.250"/3C	PILCA	1381
26	M/N	S/S Shastri Bhawan	Record Office	0.250"/3C	PILCA	900
27	M/N	S/S Shastri Bhawan	Nirman Bhawan	0.20"/3C	PILCA	1734
28	M/N	SAPRU HOUSE	H.T cable from T.V Centre	150 Sq.mm/3C	PILCA	305
29	M/N	S/S C -II Tilak Marg	Tilak Marg No.18	70 Sq.mm/3C	PILCA	629
30	M/N	S/S Yojna Bhawan	Yojna Bhawan CPWD	0.10"/3C	PILCA	200
31	M/N	S/S Yojna Bhawan	S/S DG (P&T) (GPO)	150 Sq.mm/3C	PILCA	200
32	M/N	S/S Yojna Bhawan	Jeeven Vihar	0.250"/3C	PILCA	434
33	M/N	S/S Yojna Bhawan	Jeevan Tara	0.150"/3C	PILCA	300
34	M/N	S/S Chanderlok Building	Kidwai Bhawan	300 Sq.mm/3C	XLPE	309
35	M/N	S/S Kerla House	Thapar House	300 Sq.mm/3C	PILCA	365
36	M/N	S/S T.R.C	Kidwai Bhawan	300 Sq.mm/3C	XLPE	505
37	M/N	S/S Ice Factory	S/S No.6 Tilak Marg (SAGAR APTT.)	120 sq.mm/3C	PILCA	2097
38	M/N	S/S Ice Factory	S/S M.S Hostel	120 sq.mm/3C	PILCA	400
39	M/N	TV CENTRE	Punjab house	150 Sq.mm/3C	PILCA	250
40	M/N	S/S Janpath Lane	Imperial Hotel	150 Sq.mm/3C	PILCA	398
41	M/N	Tilak Marg	18 Tilak Marg	70 Sq.mm/3C	PILCA	629
42	M/N	S/S Asha Deep	24 Ferozshah Road	70 Sq.mm/3C	PILCA	683
43	M/N	SUPER BAZAR	MODERN SCHOOL	300 Sq.mm/3C	PILCA	950
44	M/N	KACHANJANGA	AKASH DEEP BUILDING	70 Sq.mm/3C	PILCA	502

45	M/N	KAILASH BUILDING	SCINDIA HOUSE	300 Sq.mm/3C	PILCA	299
46	M/N	SCINDIA HOUSE	I.O.B	150 Sq.mm/3C	PILCA	390
47	M/N	I.O.B	BANK OF BARODA	70 Sq.mm/3C	PILCA	220
48	M/N	CITY CENTER	MOHAN SINGH PALACE	300 Sq.mm/3C	PILCA	400
49	M/N	CITY CENTER	S.B.I	300 Sq.mm/3C	PILCA	430
50	M/N	CITY CENTER	CHARTERED BANK	70 Sq.mm/3C	PILCA	312
51	M/N	YMCA	SARDAR PATEL BHAWAN	150 Sq.mm/3C	PILCA	230
52	M/N	SHIVA JI STADIUM	S. BHAGAT SINGH MARG	150 Sq.mm/3C	PILCA	380
53	M/N	SHHEED BHAGAT SINGH MARG RAJA BAZAR NO.8	BANGLA SAHIB MARG RAJA BAZAR	150 Sq.mm/3C	PILCA	250
54	M/N	BANGLA SAHIB MARG	BKS 2	150 Sq.mm/3C	PILCA	510
55	M/N	BKS 2	LADY HARDING	150 Sq.mm/3C	PILCA	1000
56	M/N	BKS 2	STATE EMPORIUM	150 Sq.mm/3C	PILCA	500
57	M/N	BAIRD LANE	HOTEL KANISKA 1	300 Sq.mm/3C	PILCA	1850
58	M/N	BAIRD LANE	KALI BARI MARG	150 Sq.mm/3C	PILCA	530
59	M/N	BB TANK	L/H RAVINDER RANG SALA	70 Sq.mm/3C	PILCA	250
60	M/N	PARK STREET	BKS MARG 1 PUMP HOUSE	150 Sq.mm/3C	PILCA	975
61	M/N	BKS MARG 1	KALI BARI MARG	150 Sq.mm/3C	PILCA	460
62	M/N	IAC	AKASH VANI BHAWAN	150 Sq.mm/3C	PILCA	310
63	M/N	CANNOUGHT CIRCUS	NEW PLAZA	300 Sq.mm/3C	PILCA	520
64	M/N	SCHOOL LANE	TILAK MARG VIA TV CENTRE		PILCA	1200
65	M/N	MODREN SCHOOL	MAYUR BHAWAN		PILCA	575
66	M/N	BHAI VEER SINGH MARG	GOLE MARKET	150 Sq.mm/3C	PILCA	500
67	M/N	MOHAN SINGH PLACE	RAJA BAZAR NO.8	150 Sq.mm/3C	PILCA	205
68	M/N	85 BLOCK	SANITARY STORE	150 Sq.mm/3C	PILCA	600
69	M/N	SANITARY STORE	PESHWA ROAD	300 Sq.mm/3C	PILCA	1004

70	M/N	SANITARY STORE	GOLE MARKET	300 Sq.mm/3C	PILCA	1215
71	M/N	RAVINDER RANG SHALA	BB TANK	70 Sq.mm/3C	PILCA	250
72	M/N	KANCHAN JUNGA	FCI	70 Sq.mm/3C	PILCA	380
73	M/S	10 Janpath	Vidyut Bhawan	150 Sq.mm/3C	PILCA	1256
74	M/S	10 Janpath	Record Office	150 Sq.mm/3C	PILCA	820
75	M/S	Vidyut Bhawan	Teen Murti Lane	300 Sq.mm/3C	PILCA	2200
76	M/S	16-Akbar Road	Darbanga House	70 Sq.mm/3C	PILCA	800
77	M/S	Dalhousie Road	Kashmir House Old	300 Sq.mm/3C	PILCA	865
78	M/S	Delhi High Court (Old)	S/S No. 6 (North Area)	300 Sq.mm/3C	PILCA	1810
79	M/S	Dalhousie Road	Rastrapati Bhawan	300 Sq.mm/3C	PILCA	532
80	M/S	Golf Link No. I	Golf Link No. II	300 Sq.mm/3C	PILCA	600
81	M/S	Nirman Bhawan	Sena Bhawan	300 Sq.mm/3C	PILCA	1125
82	M/S	Dalhousie Road	Nehru Memorial	150 Sq.mm/3C	PILCA	1500
83	M/S	Lok Nayak Bhawan	Vidyut Bhawn B-Board	300 Sq.mm/3C	PILCA	795
84	M/S	Nirman Bhawan	Vidyut Bhawan A.Board	300 Sq.mm/3C	PILCA	1940
85	M/S	Pandra Park	S/S No. 7	300 Sq.mm/3C	PILCA	45
86	M/S	Dalhousie Road	G. Block	300 Sq.mm/3C	PILCA	1000

87	M/S	Bharti Nagar	Obrai Hotel via B/R	300 Sq.mm/3C	PILCA	2250
88	M/S	Blind Relief	Obrai Hotel	300 Sq.mm/3C	PILCA	280
89	M/S	American School	Railway Colony S.P Marg	150 Sq.mm/3C	PILCA	475
90	M/S	Austrian Embassy	Bapu Dham	150 Sq.mm/3C	PILCA	1270
91	M/S	Austrian Embassy	2,3, Panchsheel Marg	150 Sq.mm/3C	PILCA	860
92	M/S	Aradhna Building	R.K Puram No.2	300 Sq.mm/3C	PILCA	950
93	M/S	2,3 Panchsheel Marg	Sikkim House	150 Sq.mm/3C	PILCA	512
94	M/S	Keventer Dairy	Fire Brigade	300 Sq.mm/3C	PILCA	795
95	M/S	Keventer Dairy	S.P Marg	300 Sq.mm/3C	PILCA	906
96	M/S	Finland Embassy	New Malcha Marg	150 Sq.mm/3C	PILCA	1508
97	M/S	Italy Embassy	Koria Embassy	70	PILCA	489
98	M/S	Delhi Earth Centre	S.P Marg D.B.B	70 Sq.mm/3C	PILCA	1100
99	M/S	Bapu Dham	Ashoka Hotel	300 Sq.mm/3C	PILCA	3200
100	M/S	Bapu Dham	Mauria Hotel	300 Sq.mm/3C	PILCA	1112
101	M/S	Bapu Dham	Taj Hotel (Two cables)	300 Sq.mm/3C	PILCA	2024
102	M/S	Belgium Embassy	Bapu Dham	300 Sq.mm/3C	PILCA	1652

103	M/S	Belgium Embassy	Singapore Embassy	150 Sq.mm/3C	PILCA	975
104	M/S	H-Block Sarojini Nagar	Nehru Park	240	PILCA	1614
105	M/S	I-Block Sarojini Nagar	Netaji Nagar old	300 Sq.mm/3C	PILCA	340
106	M/S	Akbar Lane	Kashmir House Old	300 Sq.mm/3C	PILCA	1250
107	M/S	16-Akbar Road	U.P.S.C	150 Sq.mm/3C	PILCA	1100
108	M/S	16-Akbar Road	Raksha Bhawan	150 Sq.mm/3C	PILCA	930
109	M/S	16-Akbar Road	Kota House	150 Sq.mm/3C	PILCA	750
110	M/S	Aurangzeb Lane	Uncif Building	150 Sq.mm/3C	PILCA	1400
111	M/S	Aurangzeb Lane	23 Prithive Raj Road	300 Sq.mm/3C	PILCA	350
112	M/S	Aurangzeb Lane	10-A Prithive Raj Road	300 Sq.mm/3C	PILCA	714
113	M/S	Aurangzeb Lane	3-4 South end Lane	150 Sq.mm/3C	PILCA	135
114	M/S	Aurbindo Marg	Race Course Old	300 Sq.mm/3C	PILCA	1600
115	M/S	Aurbindo Marg	Jor Bagh Pump House	300 Sq.mm/3C	PILCA	933
116	M/S	Aurbindo Marg	Mausum Bhawan (New)	300 Sq.mm/3C	PILCA	1594
117	M/S	Aurbindo Marg	Aliganj No. II	300 Sq.mm/3C	PILCA	1587
118	M/S	11-B Aurangzeb Road	3-4 South end Lane	150 Sq.mm/3C	PILCA	260

119	M/S	11-B Aurangzeb Road	3 Aurangzeb Road	150 Sq.mm/3C	PILCA	230
120	M/S	2 Aurangzeb Road	4 Aurangzeb Road	70 Sq.mm/3C	PILCA	150
121	M/S	32 Amrita Sher Gill Marg	23 Prithive Raj Road	300 Sq.mm/3C	PILCA	760
122	M/S	32 Amrita Sher Gill Marg	Vidyut Bhawan	300 Sq.mm/3C	PILCA	1140
123	M/S	6 Aurangzeb Road	3 Aurangzeb Road	70 Sq.mm/3C	PILCA	330
124	M/S	6 Aurangzeb Road	National Archives	240 Sq.mm/3C	PILCA	2200
125	M/S	6 Aurangzeb Road	Vidyut Bhawan B.Board	300 Sq.mm/3C	PILCA	175
126	M/S	6 Aurangzeb Road	Vidyut Bhawan A.Board	300 Sq.mm/3C	PILCA	175
127	M/S	6 Aurangzeb Road	10 Aurangzeb Road	70 Sq.mm/3C	PILCA	260

**DETAIL OF VARIOUS SIZE OF LT CABLES IS TO BE LAID**

**Distribution North area**

<b>S. No.</b>	<b>Name of Enquiry</b>	<b>400/3½C (Km)</b>	<b>185/3½C (Km)</b>	<b>95/3½C (Km)</b>	<b>50/3½C (Km)</b>	<b>25/3½C (Km)</b>	<b>16/4C (Km)</b>
1.	S/s Gole Market	7.638	1.020.	--	--	--	--
2.	S/s H.C.M Lane	24.645	2.290.	--	--	--	--
3.	S/s Connaught Place	7.874	0.370	--	--	--	--
4.	S/s Clive Square	7.140.	--	--	--	--	--
5.	S/s Bengali Market	1.908	0.665	0.635	0.137	--	--
<b>Total</b>		<b>49.205</b>	<b>4.345</b>	<b>0.635</b>	<b>0.137</b>	<b>--</b>	<b>--</b>



**DETAIL OF VARIOUS SIZE OF LT CABLES TO BE LAID IN DISTRIBUTION (NORTH)  
1. HCM Lane, Zone-III**

S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	SS NO. 3	60 A	325	.....	.....	.....	.....	.....
2	61	122	250	.....	.....	.....	.....	.....
3	53	8	230	.....	.....	.....	.....	.....
4	116	8	150	.....	.....	.....	.....	.....
5	116	8A	.....	60	.....	.....	.....	.....
6	8	8B	.....	60	.....	.....	.....	.....
7	8	8C	.....	60	.....	.....	.....	.....
8	8A	8B	.....	60	.....	.....	.....	.....
9	8B	8C	.....	30	.....	.....	.....	.....
10	SS NAI	65C	180	.....	.....	.....	.....	.....
11	SS NAI	65B	60	.....	.....	.....	.....	.....
12	65 B	65A	110	.....	.....	.....	.....	.....
13	65 B	41	210	.....	.....	.....	.....	.....
14	65 A	43	200	.....	.....	.....	.....	.....
15	16 A	44	240	.....	.....	.....	.....	.....
16	16A	46	240	.....	.....	.....	.....	.....
17	46	45	220	.....	.....	.....	.....	.....
18	45	44	220	.....	.....	.....	.....	.....
19	43	44	200	.....	.....	.....	.....	.....
20	50	46	220	.....	.....	.....	.....	.....
21	117	76	240	.....	.....	.....	.....	.....
22	117	118	160	.....	.....	.....	.....	.....
23	SS CSIR	41	240	.....	.....	.....	.....	.....
24	MTNL Shstri bh.	40	240	.....	.....	.....	.....	.....

25	SS Raisina	41B	200	.....	.....	.....	.....	.....
26	SS Raisina	MTNL Shastri Bh.	240	.....	.....	.....	.....	.....
27	SS Raisina	40A	.....	200	.....	.....	.....	.....
28	SS Raisina	35B	200	.....	.....	.....	.....	.....
29	SS Raisina	36	200	.....	.....	.....	.....	.....
30	35B	36	200	.....	.....	.....	.....	.....
31	67	39	240	.....	.....	.....	.....	.....
32	83B	68	240	.....	.....	.....	.....	.....
33	68	68A	150	.....	.....	.....	.....	.....
34	68C	1A	.....	250	.....	.....	.....	.....
35	1C	1B	.....	180	.....	.....	.....	.....
36	1B	1A	.....	180	.....	.....	.....	.....
37	47	76	.....	240	.....	.....	.....	.....
38	47	96	150	.....	.....	.....	.....	.....
39	67	67A	.....	220	.....	.....	.....	.....
40	38	36	200	.....	.....	.....	.....	.....
41	37	120	240	.....	.....	.....	.....	.....
42	37	36	150	.....	.....	.....	.....	.....
43	SS Raisina	42A	240	.....	.....	.....	.....	.....
44	SS NO.3	3	240	.....	.....	.....	.....	.....
45	3A	3	200	.....	.....	.....	.....	.....
46	2A	2	150	.....	.....	.....	.....	.....
47	12B	12	150	.....	.....	.....	.....	.....
48	12	12A	150	.....	.....	.....	.....	.....
49	12A	13A	200	.....	.....	.....	.....	.....
50	13A	13	200	.....	.....	.....	.....	.....
51	13	13B	200	.....	.....	.....	.....	.....

52	13B	75	200	.....	.....	.....	.....	.....
53	75	78	200	.....	.....	.....	.....	.....
54	78	48	200	.....	.....	.....	.....	.....
55	75	77	200	.....	.....	.....	.....	.....
56	77	63	200	.....	.....	.....	.....	.....
57	SS ICE FACTORY	63	240	.....	.....	.....	.....	.....
58	74	78	200	.....	.....	.....	.....	.....
59	SS NO 6	48	450	.....	.....	.....	.....	.....
60	SS NO 6	49	250	.....	.....	.....	.....	.....
61	SS NO 6	21	350	.....	.....	.....	.....	.....
62	21	22	200	.....	.....	.....	.....	.....
63	SS NO 6	20	400	.....	.....	.....	.....	.....
64	19	20A	300	.....	.....	.....	.....	.....
65	103	20A	350	.....	.....	.....	.....	.....
66	15	15A	80	.....	.....	.....	.....	.....
67	15	12	180	.....	.....	.....	.....	.....
68	SS 34 F S ROAD	14	250	.....	.....	.....	.....	.....
69	116	11	350	.....	.....	.....	.....	.....
70	80	11	200	.....	.....	.....	.....	.....
71	80	10	250	.....	.....	.....	.....	.....
72	116	17	220	.....	.....	.....	.....	.....
73	8	9	250	.....	.....	.....	.....	.....
74	8	7	180	.....	.....	.....	.....	.....
75	7	6	100	.....	.....	.....	.....	.....
76	6	5	250	.....	.....	.....	.....	.....
77	5	61	280	.....	.....	.....	.....	.....
78	73	72	100	.....	.....	.....	.....	.....

79	2A	121	200	.....	.....	.....	.....	.....
80	34	121	120	.....	.....	.....	.....	.....
81	34	62	240	.....	.....	.....	.....	.....
82	52A	32	450	.....	.....	.....	.....	.....
83	21	32A	250	.....	.....	.....	.....	.....
84	SS Patiala House	66G	250	.....	.....	.....	.....	.....
85	66G	30A	240	.....	.....	.....	.....	.....
86	66G	31	280	.....	.....	.....	.....	.....
87	SS Patiala House	30A	320	.....	.....	.....	.....	.....
88	SS Patiala House	30	120	.....	.....	.....	.....	.....
89	30	31	90	.....	.....	.....	.....	.....
90	30	143	120	.....	.....	.....	.....	.....
91	143	142	220	.....	.....	.....	.....	.....
92	142	141	120	.....	.....	.....	.....	.....
93	SS PUMP HOUSE	141	250	.....	.....	.....	.....	.....
94	141	139A	200	.....	.....	.....	.....	.....
95	141	140	90	.....	.....	.....	.....	.....
96	SS PUMP HOUSE	140	200	.....	.....	.....	.....	.....
97	141A	143	250	.....	.....	.....	.....	.....
98	SS PUMP HOUSE	144	150	.....	.....	.....	.....	.....
99	144	145	90	.....	.....	.....	.....	.....
100	145	28	350	.....	.....	.....	.....	.....
101	SS C-II	28	200	.....	.....	.....	.....	.....
102	27	146	200	.....	.....	.....	.....	.....
103	146	28	200	.....	.....	.....	.....	.....
104	136	146	250	.....	.....	.....	.....	.....
105	136	135	150	.....	.....	.....	.....	.....

106	135	137	250	.....	.....	.....	.....	.....
107	137	139	230	.....	.....	.....	.....	.....
108	139	31	250	.....	.....	.....	.....	.....
109	SS C-II	135	300	.....	.....	.....	.....	.....
110	SS C-II	59	350	.....	.....	.....	.....	.....
111	SS C-II	58D	250	.....	.....	.....	.....	.....
112	58D	58C	200	.....	.....	.....	.....	.....
113	58C	58	150	.....	.....	.....	.....	.....
114	58C	57	250	.....	.....	.....	.....	.....
115	57	23	240	.....	.....	.....	.....	.....
116	134	23	250	.....	.....	.....	.....	.....
117	23	94	250	.....	.....	.....	.....	.....
118	59	23	250	.....	.....	.....	.....	.....
119	64	70	250	.....	.....	.....	.....	.....
120	70	24	120	.....	.....	.....	.....	.....
121	151B	151		220	.....	.....	.....	.....
122	151	26	250		.....	.....	.....	.....
123	58D	SUBWAY		250	.....	.....	.....	.....
124	58	SUBWAY		280	.....	.....	.....	.....
125	C-II TILAK MARG	150	350	.....	.....	.....	.....	.....
126	C-II TILAK MARG	150A	350	.....	.....	.....	.....	.....
		<b>Total</b>	<b>24645</b>	<b>2290</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**2. E/S/S Gole Market. Zone -IV**

S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	Hanuman Road	124B	220	.....	.....	.....	.....	.....
2	124B	Hanuman Road	52	.....	.....	.....	.....	.....
3	35	124, Hanuman Road	146	.....	.....	.....	.....	.....

4	160	159, Hanuman Road	150	.....	.....	.....	.....	.....
5	159	131, Hanuman Road	130	.....	.....	.....	.....	.....
6	131	35, Hanuman Road	130	.....	.....	.....	.....	.....
7	1	38B, Hanuman Road	45	.....	.....	.....	.....	.....
8	SS old Hanuman Road	38, Hanuman Road	120	.....	.....	.....	.....	.....
9	155	44, Jai Singh Road	.....	150	.....	.....	.....	.....
10	155	43C, Jai Singh Road	.....	200	.....	.....	.....	.....
11	43c	43D, Jai Singh Road	.....	170	.....	.....	.....	.....
12	137	137B, Hanuman Road	.....	200	.....	.....	.....	.....
13	158	46, Jai Singh Road	270	.....	.....	.....	.....	.....
14	40	158, Jai Singh Road	190	.....	.....	.....	.....	.....
15	41	130, Sansad marg	200	.....	.....	.....	.....	.....
16	SS old Hanuman Road	136	300	.....	.....	.....	.....	.....
17	SS Hanuman Road	124A	280	.....	.....	.....	.....	.....
18	124A	136, Hanuman Road	200	.....	.....	.....	.....	.....
19	33	170, Hanuman Road	210	.....	.....	.....	.....	.....
20	SS Shivaji Stadium	P.P.	350	.....	.....	.....	.....	.....
21	P.P.	131, Hanuman Road	550	.....	.....	.....	.....	.....
22	131	36, Hanuman Road	130	.....	.....	.....	.....	.....
23	P.P.	29 State Emporium	150	.....	.....	.....	.....	.....
24	SS Shivaji Stadium	27, Jain Mandir	400	.....	.....	.....	.....	.....
25	26	352, Sector-IV	60	.....	.....	.....	.....	.....
26	Plika Place	198	260	.....	.....	.....	.....	.....
27	397	398 R K A Marg	150	.....	.....	.....	.....	.....
28	198	268 Albert Marg	270	.....	.....	.....	.....	.....
29	197	198 Albert Marg	100	.....	.....	.....	.....	.....

30	31A	55 Bhuli Bhatiyari	250	.....	.....	.....	.....	.....
31	SS USS	201 Valmoki Basti	280	.....	.....	.....	.....	.....
32	SS Peshwa Road	343	250	.....	.....	.....	.....	.....
33	SS Raja Bazar	25	80	.....	.....	.....	.....	.....
34	307	337 Sector-II	130	.....	.....	.....	.....	.....
35	SS BKS Marg	326 Sector-IV	250	.....	.....	.....	.....	.....
36	325	326 Sector-IV	180	.....	.....	.....	.....	.....
37	SS Unitize	58 Panchkuya Road	120	.....	.....	.....	.....	.....
38	58	152B Panchkuya Road	180	.....	.....	.....	.....	.....
39	372	345 Double Story	70	.....	.....	.....	.....	.....
40	SS Gole Market	8,Dr. lane	150	.....	.....	.....	.....	.....
41	8	13, Dr. Lane	170	.....	.....	.....	.....	.....
42	SS Palika Place	282B	230	.....	.....	.....	.....	.....
43	153	68 Multy Story	115	.....	.....	.....	.....	.....
44	63C	64 Mandir Marg	120	.....	.....	.....	.....	.....
45	64	64A Mandir Marg		300	.....	.....	.....	.....
		<b>Total</b>	<b>7638</b>	<b>1020</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>3. E/S/S Clive Square Area ( D/N Division), ZONE-IV</b>							
S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	SS Indoor Stadium	1	210	.....	.....	.....	.....	.....
2	SS Indoor Stadium	1A	190	.....	.....	.....	.....	.....
3	SS Indoor Stadium	129	280	.....	.....	.....	.....	.....
4	SS Clive Square	272	170	.....	.....	.....	.....	.....
5	SS Clive Square	279	210	.....	.....	.....	.....	.....
6	SS Park Street	288	140	.....	.....	.....	.....	.....
7	SS B K S Marg-I	94C	240	.....	.....	.....	.....	.....

8	SS B K S Marg-I	94D	220	.....	.....	.....	.....	.....
9	SS Election Commission	107	450	.....	.....	.....	.....	.....
10	SS Kali Bari	116	260	.....	.....	.....	.....	.....
11	SS Kali Bari	231	240	.....	.....	.....	.....	.....
12	SS Cement Godown	236	310	.....	.....	.....	.....	.....
13	SS North Avenue (old)	89	250	.....	.....	.....	.....	.....
14	SS Havlock Square	115	390	.....	.....	.....	.....	.....
15	75A	272, Kali Bari Marg	410	.....	.....	.....	.....	.....
16	18	19, North Avenue	110	.....	.....	.....	.....	.....
17	91A	123, G R G Road	210	.....	.....	.....	.....	.....
18	SS B K S Marg-I	109	220	.....	.....	.....	.....	.....
19	288	289, Udyan Marg	90	.....	.....	.....	.....	.....
20	289	77, Udyan Marg	120	.....	.....	.....	.....	.....
21	SS CSIR	103	150	.....	.....	.....	.....	.....
22	SS CSIR	101	110	.....	.....	.....	.....	.....
23	SS Red Cross	103A	40	.....	.....	.....	.....	.....
24	SS CNI	119	360	.....	.....	.....	.....	.....
25	107	99A, near Election Commission	800	.....	.....	.....	.....	.....
26	119	99, near Akashwani Bhawan	250	.....	.....	.....	.....	.....
27	99	99A, near Akashwani Bhawan	110	.....	.....	.....	.....	.....
28	99	104 near PTI Building	130	.....	.....	.....	.....	.....
29	236A	104A near Air India Office	90	.....	.....	.....	.....	.....
30	129	83 T K Garden	220	.....	.....	.....	.....	.....
31	104A	99A, near Akashwani Bhawan	160	.....	.....	.....	.....	.....



		<b>Total</b>	<b>7140</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>4. E/S/S Bangali Market Area ( D/N Division), ZONE-V</b>								
S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	SS SUPER BAZAR	67	272	.....	.....	.....	.....	.....
2	68F	74F	187	.....	.....	.....	.....	.....
3	63A	63C	.....	.....	148	.....	.....	.....
4	GSP,74C	70A	103	.....	.....	.....	.....	.....
5	68C	21F	.....	80	.....	.....	.....	.....
6	ESS Todermal Road	74D	324	.....	.....	.....	.....	.....
7	77D	76	155	.....	.....	.....	.....	.....
8	75	75D	.....	.....	.....	71	.....	.....
9	74B	8	.....	106	.....	.....	.....	.....
10	84	85	.....	83	.....	.....	.....	.....
11	92	92A	.....	97	.....	.....	.....	.....
12	25C	75E	.....	.....	101	.....	.....	.....
13	68C	68D	269	.....	.....	.....	.....	.....
14	80	80A	.....	58	.....	.....	.....	.....
15	69B	69C	.....	.....	79	.....	.....	.....
16	66D	66E	117	.....	.....	.....	.....	.....
17	42	42A	.....	.....	.....	66	.....	.....
18	ESS"J" Point	74D	155	.....	.....	.....	.....	.....
19	74F	74A	.....	.....	73	.....	.....	.....
20	1H	4H, Hryana Estate	.....	92	.....	.....	.....	.....
21	ESS"J" Point	74B	171	.....	.....	.....	.....	.....
22	ESS Con. Place	26,Shankar Mkt.	58	.....	.....	.....	.....	.....
23	ESS Con. Place	76A,Shankar Mkt.	97	.....	.....	.....	.....	.....

24	GSP,73	Pillary, Safder Hazmi Marg	.....	.....	134	.....	.....	.....
25	GSP,68B	6A	.....	.....	100	.....	.....	.....
26	GSP,79	63C	.....	49	.....	.....	.....	.....
27	GSP,68B	6A	.....	100	.....	.....	.....	.....
<b>Total</b>			<b>1908</b>	<b>665</b>	<b>635</b>	<b>137</b>	<b>0</b>	<b>0</b>

**5. E/S/S Connaught Place Area, ZONE-V**

S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	ESS Car Parking	1C	250	.....	.....	.....	.....	.....
2	ESS A-Block	7	120	.....	.....	.....	.....	.....
3	ESS A-Block	3C	175	.....	.....	.....	.....	.....
4	ESS New Marina	62B	200	.....	.....	.....	.....	.....
5	62	61	100	.....	.....	.....	.....	.....
6	ESS Estate Emporium	61	250	.....	.....	.....	.....	.....
7	ESS Mohan Singh Place	60A	185	.....	.....	.....	.....	.....
8	ESS Mohan Singh Place	60	185	.....	.....	.....	.....	.....
9	60	61	65	.....	.....	.....	.....	.....
10	60A	60B	.....	100	.....	.....	.....	.....
11	ESS Mohan Singh Place	59	200	.....	.....	.....	.....	.....
12	ESS Mohan Singh Place	59A	120	.....	.....	.....	.....	.....
13	59	59A	55	.....	.....	.....	.....	.....
14	USS Regal Building	57E	70	.....	.....	.....	.....	.....
15	USS Regal Building	56	140	.....	.....	.....	.....	.....
16	41	56	230	.....	.....	.....	.....	.....
17	41B	55	230	.....	.....	.....	.....	.....
18	41A	55	220	.....	.....	.....	.....	.....
19	41B	56	220	.....	.....	.....	.....	.....

20	ESS Car Parking	79A	380	.....	.....	.....	.....	.....
21	34E	34G	200	.....	.....	.....	.....	.....
22	49F	37	360	.....	.....	.....	.....	.....
23	ESS Scindia House	45A	110	.....	.....	.....	.....	.....
24	ESS Scindia House	48D	65	.....	.....	.....	.....	.....
25	ESS Scindia House	44B	100	.....	.....	.....	.....	.....
26	ESS Scindia House	40	125	.....	.....	.....	.....	.....
27	ESS Scindia House	48C	125	.....	.....	.....	.....	.....
28	ESS Merchanite House	38A	2X150=300	.....	.....	.....	.....	.....
29	40A	40B	55	.....	.....	.....	.....	.....
30	40C	40E		50	.....	.....	.....	.....
31	40E	40D		50	.....	.....	.....	.....
32	48A	47B	200	.....	.....	.....	.....	.....
33	48A	47A	200	.....	.....	.....	.....	.....
34	46B	45D	2X115=230	.....	.....	.....	.....	.....
35	45D	45F	40	.....	.....	.....	.....	.....
36	ESS Scindia House	47	200	.....	.....	.....	.....	.....
37	ESS Scindia House	52	110	.....	.....	.....	.....	.....
38	ESS Indian Oil Bhawan	52	65	.....	.....	.....	.....	.....
39	ESS Indian Oil Bhawan	37	300	.....	.....	.....	.....	.....
40	ESS Indian Oil Bhawan	38	300	.....	.....	.....	.....	.....
41	ESS Indian Oil Bhawan	40B	210	.....	.....	.....	.....	.....
42	49E	39	360	.....	.....	.....	.....	.....
43	49E	64B	180	.....	.....	.....	.....	.....
44	49F	38	360	.....	.....	.....	.....	.....
45	36	36A	160	.....	.....	.....	.....	.....

46	50	50A	.....	50	.....	.....	.....	.....
47	36A	4	.....	50	.....	.....	.....	.....
48	36A	37A	.....	70	.....	.....	.....	.....
49	55	55A	125	.....	.....	.....	.....	.....
50	ESS Mohan Dev Building	64C	200	.....	.....	.....	.....	.....
51	64C	46	129	.....	.....	.....	.....	.....
52	45E	64D	200	.....	.....	.....	.....	.....
	<b>Total</b>		<b>7874</b>	<b>370</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**DETAIL OF VARIOUS SIZE OF LT CABLES IS TO BE LAID**

**Distribution South area**

S. No.	Name of Enquiry	400 sqmm/3.5C (Km)	185 sqmm/3.5C (Km)	95 sqmm/3.5C (Km)	50 sqmm/3.5C (Km)	25 sqmm/3.5C (Km)	16 sqmm/3.5C (Km)
1.	ESS Aurbind o Marg	6.513	0.635	----	-----	----	-----
2.	ESS S.P. Marg	4.0250	0.990	0.835	0.465	0.495	0.544
3.	ESS Dalhous ie Road	5.490	1.087	1.680	0.537	0.520	0.577
4.	ESS I-Block, Sarojini Nagar	5.540	-----	-----	-----	-----	-----
5.	ESS Moti Bagh	10.183	-----	----	-----	----	-----
6.	ESS Kidwai Nagar West	2.003	----	-----	-----	----	----
7.	ESS Lok Nayak Bhawan	12.076	-----	-----	-----	-----	-----
8.	ESS Bharti Nagar	3.0	-----	-----	-----	-----	-----
<b>Total (In KM)</b>		<b>48.830</b>	<b>2.712</b>	<b>2.515</b>	<b>1.002</b>	<b>1.015</b>	<b>1.121</b>

## DETAIL OF VARIOUS SIZE OF LT CABLES TO BE LAID

### 1.E/S/S Aurbindo marg

S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	S/S CPWD Staff Quarter, Aliganj	P.No - 38A	175	.....	.....	.....	.....	.....
2	S/S CPWD Staff Quarter, Aliganj	P.No - 38	172	.....	.....	.....	.....	.....
3	P.No - 10A	P.No - 10C	.....	70	.....	.....	.....	.....
4	P.No - 138A	P.No - 138	.....	65	.....	.....	.....	.....
5	P.No - 139	P.No - 139A	.....	35	.....	.....	.....	.....
6	P.No - 122	P.No - 139A	.....	95	.....	.....	.....	.....
7	P.No - 11	P.No - 140B	.....	75	.....	.....	.....	.....
8	P.No - 127C	P.No - 125	143	.....	.....	.....	.....	.....
9	P.No - 127C	P.No - 12C	231	.....	.....	.....	.....	.....
10	S/S Aurbindo Marg	P.No - 80	250	.....	.....	.....	.....	.....
11	P.No - 83	P.No - 83A	100	.....	.....	.....	.....	.....
12	P.No - 83	P.No - 84	.....	165	.....	.....	.....	.....
13	S/S Mausam Bhawan	P.No - 14	157	.....	.....	.....	.....	.....
14	S/S No-1 , Jor Bagh	P.No - 19	260	.....	.....	.....	.....	.....
15	S/S No-1 , Jor Bagh	P.No - 26	150	.....	.....	.....	.....	.....
16	P.No - 7A	P.No - 35C	500	.....	.....	.....	.....	.....
17	P.No - 7A	P.No - 3	160	.....	.....	.....	.....	.....
18	P.No - 3	P.No - 1D	200	.....	.....	.....	.....	.....
19	P.No - 1A	P.No - 1D	200	.....	.....	.....	.....	.....
20	P.No - 1A	P.No. 1C	380	.....	.....	.....	.....	.....
21	P.No - 1D	P.No. 1C	180	.....	.....	.....	.....	.....
22	P.No - 1C	P.No. 2C	170	.....	.....	.....	.....	.....
23	P.No - 2C	P.No. 25A	250	.....	.....	.....	.....	.....

<b>24</b>	P.No - 2	P.No. 2A	<b>380</b>	.....	.....	.....	.....	.....
<b>25</b>	P.No - 110	P.No. 110A		.....	.....	.....	.....	.....
<b>26</b>	P.No - 108	P.No. 9	<b>500</b>	.....	.....	.....	.....	.....
<b>27</b>	P.No - 103	P.No. 28	<b>615</b>	.....	.....	.....	.....	.....
<b>28</b>	P.No - 103	P.No. 29	<b>740</b>	.....	.....	.....	.....	.....
<b>29</b>	P.No - 104	P.No. 30	<b>190</b>	.....	.....	.....	.....	.....
<b>30</b>	P.No - 104C	P.No. 30A	<b>180</b>	.....	.....	.....	.....	.....
<b>31</b>	P.No - 30B	P.No. 30	<b>75</b>	.....	.....	.....	.....	.....
<b>32</b>	P.No - 34B	P.No. 33	.....	.....	.....	.....	.....	.....
<b>33</b>	P.No - 37A	P.No. 36	<b>155</b>	.....	.....	.....	.....	.....
<b>34</b>	P.No - 8	P.No. 37	.....	.....	.....	.....	.....	.....
<b>35</b>	P.No - 133	P.No. 8	.....	.....	.....	.....	.....	.....
<b>36</b>	P.No - 134	P.No. 8	.....	.....	.....	.....	.....	.....
<b>37</b>	P.No - 135	P.No. 38	.....	.....	.....	.....	.....	.....
	<b>Total</b>		<b>6513</b>	<b>635</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>2. E/S/S S.P Marg</b>								
<b>S.No.</b>	<b>Location</b>		<b>LT cable proposed (in meters)</b>					
	<b>From</b>	<b>to</b>	<b>400 sq.mm</b>	<b>185 sq.mm</b>	<b>95 sq.mm</b>	<b>50 sq.mm</b>	<b>25 sq.mm</b>	<b>16 sq.mm</b>
1	P.No - 39B	P.No - 39C	65	.....	.....	.....	.....	.....
2	P.No - 39C	P.No - 39E	380	.....	.....	.....	.....	.....
3	P.No - 77B	P.No - 39B	230	.....	.....	.....	.....	.....
4	P.No - 67	P.No - 67A	70	.....	.....	.....	.....	.....
5	P.No - 17	P.No - 52A	60	.....	.....	.....	.....	.....
6	P.No - 83	P.No - 32C	255	.....	.....	.....	.....	.....
7	P.No - 59	P.No - 59A	200	.....	.....	.....	.....	.....
8	P.No - 59A	P.No - 60	255	.....	.....	.....	.....	.....
9	P.No - 5	P.No - 8	200	.....	.....	.....	.....	.....

10	P.No - 74A	P.No - 17	210	.....	.....	.....	.....	.....
11	P.No - 23	P.No - 24	115	.....	.....	.....	.....	.....
12	P.No - 16	P.No - 50B	155	.....	.....	.....	.....	.....
13	S/S Circular Road	P.No - 16	390	.....	.....	.....	.....	.....
14	P.No - 83	P.No - 30	200	.....	.....	.....	.....	.....
15	P.No - 35	P.No - 32C	120	.....	.....	.....	.....	.....
16	P.No - 32C	P.No - 32D	425	.....	.....	.....	.....	.....
17	P.No - 5	P.No - 62	300	.....	.....	.....	.....	.....
18	P.No - 56C	P.No - 56A	45	.....	.....	.....	.....	.....
19	S/S Tamilnadu House	P.No - 17	350	.....	.....	.....	.....	.....
20	P.No - 77A	P.No - 21	.....	.....	.....	.....	.....	.....
21	P.No - 77B	Mini Pillar Near Saudi Arab Embassy	.....	225	.....	.....	.....	.....
22	P.No - 70	Dhobi Ghat Bapu Dham	.....	.....	45	.....	.....	.....
23	P.No - 42	MES Pump I.B Colony	.....	.....	130	.....	.....	.....
24	P.No - 76	Nehru Park Pump NDMC	.....	.....	80	.....	.....	.....
25	P.No - 65	P.No - 65A	.....	.....	210	.....	.....	.....
26	P.No - 83	P.No - T.M - 11	.....	.....	370	.....	.....	.....
27	P.No - 75	NDMC Pump Nehru Park	.....	.....	.....	160	.....	.....
28	P.No - 77B	NDMC Pump Near Thai Embassy	.....	.....	.....	190	.....	.....
29	P.No - 51	Police Station Chankyapuri	.....	.....	.....	115	.....	.....
30	P.No - 45	1 x 25 Sq.mm/3.5C	.....	.....	.....	.....	115	.....
31	P.No - 44	1 x 25 Sq.mm/3.5C	.....	.....	.....	.....	75	.....
32	P.No - 43	1 x 25 Sq.mm/3.5C	.....	.....	.....	.....	135	.....
33	P.No - 4A	1 x 25 Sq.mm/3.5C	.....	.....	.....	.....	70	.....
34	P.No - 7	1 x 25 Sq.mm/3.5C	.....	.....	.....	.....	100	.....
35	P.No - 55	NDMC Pump Fire station Kautilya Marg	.....	.....	.....	.....	.....	134



36	P.No - 32G	NDMC Civil Enquiry Bapu Dham	.....	.....	.....	.....	.....	200
37	P.No - 17	NDMC Fountain Circle Samrat Hotel	.....	.....	.....	.....	.....	210
<b>Total</b>			<b>4025</b>	<b>990</b>	<b>835</b>	<b>465</b>	<b>495</b>	<b>544</b>

<b>3.E/S/S Dalhousie Road</b>								
<b>S.No.</b>	<b>Location</b>		<b>LT cable proposed (in meters)</b>					
	<b>From</b>	<b>to</b>	<b>400 sq.mm</b>	<b>185 sq.mm</b>	<b>95 sq.mm</b>	<b>50 sq.mm</b>	<b>25 sq.mm</b>	<b>16 /4 c sq.mm</b>
1	P.No - 14	P.No - 15	220	.....	.....	.....	.....	.....
2	P.No - 14A	P.No - 15	225	.....	.....	.....	.....	.....
3	P.No - 10A	P.No - 8A	455	.....	.....	.....	.....	.....
4	P.No - 10A	P.No - 4D	422	.....	.....	.....	.....	.....
5	S/S No. 1	P.No - 5A	485	.....	.....	.....	.....	.....
6	S/S Kahmir House	P.No - 31	360	.....	.....	.....	.....	.....
7	P.No - 46	P.No - 47	290	.....	.....	.....	.....	.....
8	P.No - 10C	P.No - 10B via Pillar no. 11E	350	.....	.....	.....	.....	.....
9	P.No - 91	P.No - 9H	280	.....	.....	.....	.....	.....
10	S/S Nirman Bhawan	P.No - 22	432	.....	.....	.....	.....	.....
11	P.No - 50B S/S SP Marg Area	P.No - 11E	500	.....	.....	.....	.....	.....
12	P.No - 54	P.No - 53	370	.....	.....	.....	.....	.....
13	P.No - 54A	P.No - 53	366	.....	.....	.....	.....	.....
14	P.No - 22D	P.No - 22H	145	.....	.....	.....	.....	.....
15	P.No - 23A	P.No - 22H	120	.....	.....	.....	.....	.....
16	P.No - 30	P.No - 31	270	.....	.....	.....	.....	.....
17	P.No - 31	P.No - 32	200	.....	.....	.....	.....	.....
18	P.No - 1	P.No - 1B	.....	210	.....	.....	.....	.....
19	P.No - 4	P.No - 4C	.....	116	.....	.....	.....	.....
20	P.No - 46	P.No - 47	.....	306	.....	.....	.....	.....

21	P.No - 4C	P.No - 8	.....	120	.....	.....	.....	.....
22	P.No - 32A	P.No - 32B	.....	102	.....	.....	.....	.....
23	P.No - 24	P.No - 24H	.....	105	.....	.....	.....	.....
24	P.No - 45	P.No - 45B	.....	128	.....	.....	.....	.....
25	P.No - 40A	BN 7 Akbar Road	.....	.....	80	.....	.....	.....
26	P.No - 40	BN 9 Akbar Road	.....	.....	160	.....	.....	.....
27	P.No - 78	SWO Office Air Force Station	.....	.....	140	.....	.....	.....
28	P.No - 85B	VVIP Transit Block Air Force Station	.....	.....	115	.....	.....	.....
29	P.No - 78	Block No. 10 Air Force Station	.....	.....	75	.....	.....	.....
30	P.No - 78	Block No. 14 Air Force Station	.....	.....	115	.....	.....	.....
31	P.No - 9H	B.No 22 Mother Tresa Crescent	.....	.....	120	.....	.....	.....
32	P.No - 18B	BN 6 Akbar Road	.....	.....	90	.....	.....	.....
33	P.No - 6	BN 19 Teen Murti Marg	.....	.....	90	.....	.....	.....
34	P.No - 45B	BN 32 Aurangzeb Road	.....	.....	190	.....	.....	.....
35	P.No - 20	B.No 2 K.Kam Raj Lane	.....	.....	155	.....	.....	.....
36	P.No - 9	P.No - 9B	.....	.....	350	.....	.....	.....
37	P.No - 36	BN 4 Teen Murti Lane	.....	.....	.....	72	.....	.....
38	P.No - 36	BN 5 Teen Murti Lane	.....	.....	.....	62	.....	.....
39	P.No - 32A	BN 3 Teen Murti Marg	.....	.....	.....	147	.....	.....
40	P.No - 32	BN 5 Teen Murti Marg	.....	.....	.....	80	.....	.....
41	P.No - 44	BN 3 Safdarjung Road	.....	.....	.....	96	.....	.....
42	P.No - 17A	BN 4 Akbar Road	.....	.....	.....	80	.....	.....
43	P.No - 44	S/S Qtr BN 3 Safdarjung Road	.....	.....	.....	.....	130	.....
44	P.No - 44	S/S Qtr BN 5 Safdarjung Road	.....	.....	.....	.....	125	.....
45	P.No - 52	S/S Qtr BN 37 Aurangzeb Road S/Light	.....	.....	.....	.....	135	.....
46	P.No - 52A	S/S Qtr BN 12 Safdarjung Road	.....	.....	.....	.....	130	.....

47	P.No - 45B	S/S Qtr BN 34 Aurangzeb Road	.....	.....	.....	.....	.....	72
48	P.No - 46	S/S Qtr BN 18 Tuglak Crescent	.....	.....	.....	.....	.....	70
49	P.No - 51A	S/S Qtr BN 22 Tuglak Crescent	.....	.....	.....	.....	.....	60
50	P.No - 51A	S/S Qtr BN 24 Tuglak Crescent	.....	.....	.....	.....	.....	115
51	P.No - 36	S/S Qtr BN 4 Teen Murti Lane	.....	.....	.....	.....	.....	80
52	P.No - 47	S/S Qtr BN 15 Safdarjung Road	.....	.....	.....	.....	.....	120
53	P.No - 47	S/S Qtr BN 15 Safdarjung Road	.....	.....	.....	.....	.....	60
<b>Total</b>			<b>5490</b>	<b>1087</b>	<b>1680</b>	<b>537</b>	<b>520</b>	<b>577</b>

<b>4.E/S/S I Block Sarojni Nagar.</b>								
S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	S/S K - Block, S. Nagar	P. No. 86	280					
2	S/S K - Block, S. Nagar	P. No. 90	270	.....	.....	.....	.....	.....
3	S/S H - Block, S. Nagar	P. No. 7	250	.....	.....	.....	.....	.....
4	S/S H - Block, S. Nagar	P. No. 76	250	.....	.....	.....	.....	.....
5	S/S D- Block, S. Nagar	P. No. 4D	250	.....	.....	.....	.....	.....
6	S/S D- Block, S. Nagar	P. No. 34B	290	.....	.....	.....	.....	.....
7	S/S D- Block, S. Nagar	P. No. 4	250	.....	.....	.....	.....	.....
8	S/S D- Block, S. Nagar	P. No. 35A	250	.....	.....	.....	.....	.....
9	S/S D- Block, S. Nagar	P. No. 4	250	.....	.....	.....	.....	.....
10	S/S C- Block, S. Nagar	P. No. 4	250	.....	.....	.....	.....	.....
11	S/S C- Block, S. Nagar	P. No. 5BA	250	.....	.....	.....	.....	.....
12	S/S C- Block, S. Nagar	P. No. 5D	200	.....	.....	.....	.....	.....
13	S/S C- Block, S. Nagar	P. No. 18	150	.....	.....	.....	.....	.....
14	S/S C- Block, S. Nagar	P. No. 16	150	.....	.....	.....	.....	.....
15	S/S B- Block, S. Nagar	P. No. 1B	250	.....	.....	.....	.....	.....
16	S/S WTI, Netaji Nagar	P. No. 33	250	.....	.....	.....	.....	.....

17	S/S Old Netaji Nagar	P. No. 5A via 6C	250	.....	.....	.....	.....	.....
18	S/S Old Netaji Nagar	P. No. 28	250	.....	.....	.....	.....	.....
19	S/S A- Block, Netaji Nagar	P. No. 16	100	.....	.....	.....	.....	.....
20	S/S R.K. Puram	P. No. 3	330	.....	.....	.....	.....	.....
21	S/S R.K. Puram	P. No. 6 coffe home	200	.....	.....	.....	.....	.....
22	S/S ARD	P. No. 2	170	.....	.....	.....	.....	.....
23	S/S ARD	P. No. 4	250	.....	.....	.....	.....	.....
24	S/S R. K. Puram No. 2	P. No. 2A	150	.....	.....	.....	.....	.....
<b>Total</b>			<b>5540</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

5.E/S/S Moti Bagh								
S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	ESS Moti Bagh	P. No. 98	134	.....	.....	.....	.....	.....
2	ESS Moti Bagh	P. No. 51	274	.....	.....	.....	.....	.....
3	ESS Moti Bagh	P. No. 87	140	.....	.....	.....	.....	.....
4	ESS Railway Secretary Board	P. No. 116	140	.....	.....	.....	.....	.....
5	ESS Railway Secretary Board	P. No. 104	280	.....	.....	.....	.....	.....
6	ESS Railway Secretary Board	P. No. 118	290	.....	.....	.....	.....	.....
7	ESS Moti Bagh	P. No. 101	240	.....	.....	.....	.....	.....
8	ESS Moti Bagh	P. No. 102	245	.....	.....	.....	.....	.....
9	ESS Railway Secretary Board	P. No. 104	270	.....	.....	.....	.....	.....
10	ESS Moti Bagh	P. No. 106	120	.....	.....	.....	.....	.....
11	ESS Moti Bagh	P. No. 73	530	.....	.....	.....	.....	.....
12	ESS Moti Bagh	P. No. 94	135	.....	.....	.....	.....	.....
13	ESS Moti Bagh	P. No. 93	265	.....	.....	.....	.....	.....

14	ESS Unitized (Shanti Path)	P. No. 76	100	.....	.....	.....	.....	.....
15	ESS Unitized (Shanti Path)	P. No. 78	45	.....	.....	.....	.....	.....
16	ESS Satya Sadana	P. No. 213	130	.....	.....	.....	.....	.....
17	ESS Satya Sadana	P. No. 215	310	.....	.....	.....	.....	.....
18	ESS Satya Sadana	P. No. 217	510	.....	.....	.....	.....	.....
19	ESS Satya Sadana	P. No. 220	640	.....	.....	.....	.....	.....
20	ESS Satya Sadana	P. No. 210	260	.....	.....	.....	.....	.....
21	ESS Satya Sadana	P. No. 207	350	.....	.....	.....	.....	.....
22	ESS Satya Sadana	P. No. 224	500	.....	.....	.....	.....	.....
23	ESS Amrit Bhawan	P. No. 202	85	.....	.....	.....	.....	.....
24	ESS Amrit Bhawan	P. No. 201	80	.....	.....	.....	.....	.....
25	ESS Amrit Bhawan	P. No. 199	100	.....	.....	.....	.....	.....
26	ESS D-I	P. No. 190	100	.....	.....	.....	.....	.....
27	ESS D-I	P. No. 190	100	.....	.....	.....	.....	.....
28	ESS D-I	P. No. 189	80	.....	.....	.....	.....	.....
29	ESS D-I	P. No. 208	390	.....	.....	.....	.....	.....
30	ESS Navy	P. No. 231	270	.....	.....	.....	.....	.....
31	ESS Navy	P. No. 151	180	.....	.....	.....	.....	.....
32	ESS Satya Sadana	P. No. 223	120	.....	.....	.....	.....	.....
33	P. No. 221	P. No. 223	160	.....	.....	.....	.....	.....
34	P. No. 194	P. No. 198	105	.....	.....	.....	.....	.....
35	P. No. 186	P. No. 176	250	.....	.....	.....	.....	.....
36	ESS Nehru Park	P. No. 178	180	.....	.....	.....	.....	.....
37	P. No. 178	P. No. 179	230	.....	.....	.....	.....	.....
38	ESS Nehru Park	P. No. 177	320	.....	.....	.....	.....	.....
39	P. No. 177	P. No. 168	130	.....	.....	.....	.....	.....

40	ESS Akbar Bhawan	P. No. 172	110	.....	.....	.....	.....	.....
41	ESS Chankya Bhawan	P. No. 173	235	.....	.....	.....	.....	.....
42	P. No. 179	P. No. 75A	350	.....	.....	.....	.....	.....
43	P. No. 75A	P. No. 181	250	.....	.....	.....	.....	.....
44	P. No. 181	P. No. 180	100	.....	.....	.....	.....	.....
45	P. No. 76	P. No. 181	250	.....	.....	.....	.....	.....
46	P. No. 181	P. No. 180	100	.....	.....	.....	.....	.....
<b>Total</b>			<b>10183</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

6.E/S/S KIDWAI Nagar								
S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	ESS L.B .N. No. 2	P. No. 36	280	.....	.....	.....	.....	.....
2	ESS L.B .N. No. 2	P. No. 5B	180	.....	.....	.....	.....	.....
3	P. No. 1	P. No. 51	200	.....	.....	.....	.....	.....
4	P. No. 36	P. No. 37	170	.....	.....	.....	.....	.....
5	P. No. 36	P. No. 50A	190	.....	.....	.....	.....	.....
6	P. No. 33A	P. No. 35A	140	.....	.....	.....	.....	.....
7	P. No. 33A	P. No. 12 C	105	.....	.....	.....	.....	.....
8	ESS L.B .N. No. 1	P. No. 12 C	215	.....	.....	.....	.....	.....
9	ESS K.N. W	P. No. 2	85	.....	.....	.....	.....	.....
10	P. No. 1	P. No. 2	120	.....	.....	.....	.....	.....
11	P. No. 2	P. No. 3	188	.....	.....	.....	.....	.....
12	P. No. 1	P. No. 2	130	.....	.....	.....	.....	.....
<b>Total</b>			<b>2003</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

7.E/S/S Bharti Nagar								
S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	ESS Golf link No. 3	P. No. 35	160	.....	.....	.....	.....	.....

2	ESS Golf link No. 3	P. No. 42	430	.....	.....	.....	.....	.....
3	ESS Golf link No. 3	P. No. 22	140	.....	.....	.....	.....	.....
4	P. No.8B	P. No. 36	370	.....	.....	.....	.....	.....
5	P. No.7	P. No. 18	160	.....	.....	.....	.....	.....
6	P. No.4	P. No. 5	225	.....	.....	.....	.....	.....
7	ESS Golf link No. 2	P. No. 13	90	.....	.....	.....	.....	.....
8	ESS Golf link No. 2	P. No. 43	265	.....	.....	.....	.....	.....
9	P. No.42	P. No. 43	70	.....	.....	.....	.....	.....
10	P. No.13	P. No. 27	180	.....	.....	.....	.....	.....
11	P. No.51	P. No. 50	80	.....	.....	.....	.....	.....
12	P. No.31	P. No. 51	90	.....	.....	.....	.....	.....
13	ESS Bharti Nagar	P. No. 32	245	.....	.....	.....	.....	.....
14	P. No.21A	P. No. 56	180	.....	.....	.....	.....	.....
15	P. No.8 B	P. No. 25	315	.....	.....	.....	.....	.....
	<b>Total</b>		<b>3000</b>					

<b>8.E/S/S Khan Market</b>								
S.No.	Location		LT cable proposed (in meters)					
	From	to	400 sq.mm	185 sq.mm	95 sq.mm	50 sq.mm	25 sq.mm	16 sq.mm
1	ESS Golf link No. 1	P. No. 74	600	.....	.....	.....	.....	.....
2	ESS Golf link No. 1	P. No.15	300	.....	.....	.....	.....	.....
3	ESS Golf link No. 1	P. No. 15A	200	.....	.....	.....	.....	.....
4	ESS Golf Aptt.	P. No. 92A	750	.....	.....	.....	.....	.....
5	ESS Khan Markt.	P. No. 16	120	.....	.....	.....	.....	.....
6	P. No. 16	P. No. 16A	120	.....	.....	.....	.....	.....
7	P. No. 9	P. No. 8	90	.....	.....	.....	.....	.....
8	P. No. 16A	P. No. 16C	70	.....	.....	.....	.....	.....
9	P. No. 9A	P. No. 9	40	.....	.....	.....	.....	.....

10	P. No. 9A	P. No. 9C	35	.....	.....	.....	.....	.....
11	P. No. 1	P. No. 10D	50	.....	.....	.....	.....	.....
12	ESS Khan Markt.	P. No. 10A	130	.....	.....	.....	.....	.....
13	ESS Khan Markt.	P. No.19 (Rabindra Nagar)	580	.....	.....	.....	.....	.....
14	P. No. 12	Barat Ghar Khan Mrkt.	120	.....	.....	.....	.....	.....
15	P. No. 1	BG P.No. II	140	.....	.....	.....	.....	.....
16	P. No. 12	BG P.No. II	100	.....	.....	.....	.....	.....
17	BG P.No. I	P. No. 12 J	140	.....	.....	.....	.....	.....
18	P. No. 12 C	P. No. 12 F	70	.....	.....	.....	.....	.....
19	P. No. 16 G	P. No. 12 G	70	.....	.....	.....	.....	.....
20	P. No. 12 G	P. No. 12 F	70	.....	.....	.....	.....	.....
21	P. No. 12 D	P. No. 12 E	60	.....	.....	.....	.....	.....
22	P. No. 12 E	P. No. 43	300	.....	.....	.....	.....	.....
23	P. No. 43	P. No. 44	70	.....	.....	.....	.....	.....
24	P. No. 44	P. No. 45	210	.....	.....	.....	.....	.....
25	P. No. 45	P. No. 12 H	170	.....	.....	.....	.....	.....
26	P. No. 42	P. No. 43	60	.....	.....	.....	.....	.....
27	P. No. 42	P. No. 47	240	.....	.....	.....	.....	.....
28	P. No. 41	P. No. 42	120	.....	.....	.....	.....	.....
29	P. No. 41	P. No. 39	130	.....	.....	.....	.....	.....
30	P. No. 48	P. No. 35	100	.....	.....	.....	.....	.....
31	P. No. 48	P. No. 35A	240	.....	.....	.....	.....	.....
32	P. No. 48B	P. No. 47	100	.....	.....	.....	.....	.....
33	P. No. 47	P. No. 46	170	.....	.....	.....	.....	.....
34	P. No. 46	P. No. 46B	90	.....	.....	.....	.....	.....
35	P. No. 46B	P. No. 46A	70	.....	.....	.....	.....	.....
36	P. No. 65	P. No. 66	120	.....	.....	.....	.....	.....



37	P. No. 66	P. No. 67	110	.....	.....	.....	.....	.....
38	P. No. 67	P. No. 72	90	.....	.....	.....	.....	.....
39	P. No. 67	P. No. 69	320	.....	.....	.....	.....	.....
40	P. No. 69	P. No. 70	140	.....	.....	.....	.....	.....
41	P. No. 70	P. No. 71	60	.....	.....	.....	.....	.....
42	P. No. 71	P. No. 72	230	.....	.....	.....	.....	.....
43	P. No. 65	P. No. 64	260	.....	.....	.....	.....	.....
44	P. No. 64	P. No. 63	340	.....	.....	.....	.....	.....
45	P. No. 65	P. No. 62	140	.....	.....	.....	.....	.....
46	P. No. 62	P. No. 63	230	.....	.....	.....	.....	.....
47	P. No. 63	P. No. 45	130	.....	.....	.....	.....	.....
48	P. No. 61	P. No. 70	320	.....	.....	.....	.....	.....
49	P. No. 35	P. No. 34C	240	.....	.....	.....	.....	.....
50	P. No. 34C	P. No. 34B	70	.....	.....	.....	.....	.....
51	P. No. 34B	P. No. 32	230	.....	.....	.....	.....	.....
52	P. No. 32	ESS Children Park	140	.....	.....	.....	.....	.....
53	P. No. 34D	P. No. 52	101	.....	.....	.....	.....	.....
54	P. No. 32	P. No. 26	210	.....	.....	.....	.....	.....
55	ESS P. Park	P. No. 70	260	.....	.....	.....	.....	.....
56	ESS P. Park	P. No. 71	250	.....	.....	.....	.....	.....
57	ESS P. Park	P. No. 85	330	.....	.....	.....	.....	.....
58	ESS P. Park	P. No. 55	330	.....	.....	.....	.....	.....
59	P. No. 115	P. No. 83	520	.....	.....	.....	.....	.....
60	P. No. 115	P. No. 77	980	.....	.....	.....	.....	.....
		<b>Total</b>	<b>12076</b>					

## Abstract of cables to be laid

S. No.	Name of Division	400/3½C (Km)	185/3½C (Km)	95/3½C (Km)	50/3½C (Km)	25/3½C (Km)	16/4C
1.	Distribution North Division	49.205	4.345	0.635	0.137	--	--
2.	Distribution South Division	48.830	2.712	2.515.	1.002	1.015	1.121
3.	<b>Grand total</b>	<b>98.035</b>	<b>7.057</b>	<b>3.150</b>	<b>1.139</b>	<b>1.015</b>	<b>1.121</b>
4.	<b>Say</b>	<b>100.00</b>	<b>7.50</b>	<b>3.50</b>	<b>1.50</b>	<b>1.50</b>	<b>1.50</b>

**SCHEDULE OF WORK**

**Name of Work: IMPLEMENTATION OF SMART GRID INFRASTRUCTURE INCLUDING ENHANCING OF EXISTING NETWORK  
IN NDMC POWER DISTRIBUTION AREA**

**Sub-head: Supplying & Laying Underground 11 KV Cable of Size 400 Sq mm. and L.T Cables of Various Sizes in NDMC area.**

<b>S. No</b>	<b>Description of Item Part A</b>	<b>Qty.</b>	<b>Unit</b>	<b>Ex-works Rate Per Unit</b>	<b>GST Per Unit</b>	<b>Cartage and Insurance Per Unit</b>	<b>Amount Qty. X (Ex Work Rate + GST+C&amp;I)</b>	
1	Supply of 11 kV HT XPLE Cable of size 400 Sq.mm 3 C duly ISI marked and as per technical specification at Annexure-B	105	Km					
2	Supply of 1.1 kV grade XLPE Insulated, Aluminum conductor, armoured cable duly ISI marked and as per Technical specification at Annexure- C of following Size							
a.	400 Sqmm 3.5C	100	Km					
b.	185 Sqmm. 3.5C	7.5	Km					
c.	95 Sqmm. 3.5C	3.5	Km					
d.	50 Sqmm. 3.5C	1.5	Km					
e.	25 Sqmm. 3.5C	1.5	Km					
f.	16 Sqmm. 4C	1.5	Km					
	<b>GRAND TOTAL</b>							

**Part B- Laying of HT cable**

<b>S.No.</b>	<b>Description of Item</b>	<b>Qty.</b>	<b>Unit</b>	<b>Rate</b>	<b>GST</b>	<b>Amount</b>
1	Laying of XLPE insulated 11 kV grade H.T cable of size 400 Sqmm. 3C direct in ground including excavation, sand cushioning, protective covering & refilling the trench as per specifications in <b>Soft Soil.</b>	58	Km			
2	Laying of XLPE insulated 11 kV grade H.T cable of size 400 Sqmm. 3C direct in ground including excavation, sand cushioning, protective covering & refilling the trench as per specifications in <b>Hard / Rocky soil</b>	11	Km			
3	Laying of XLPE insulated 11 kV grade H.T additional Cable of sizes 400 Sqmm. 3C direct in ground in the same trench & in one tier horizontal formation including excavation, sand cushioning, protective covering, refilling the trench etc. as per specifications in <b>Soft Soil.</b>	10	Km			
4	Laying of XLPE insulated 11 kV grade H.T additional Cable of sizes 400 Sqmm. 3C direct in ground in the same trench & in one tier horizontal formation including excavation, sand cushioning, protective covering, refilling the trench etc. as per specifications in <b>Hard/ Rocky soil.</b>	3	Km			

5		Handling/Laying of XLPE insulated 11 kV grade H.T cables of sizes 400 Sqmm. 3C which are not necessarily laid in ground but part of it going up to panel, transformer & part in the building in open trench or otherwise	1	Km			
6		Drawing of XLPE insulated 11 kV grade H.T cables of sizes 400 Sqmm. 3C in existing RCC/HDPE Pipe, closed duct, subway or Sub Station.	22	Km			
7		Road cut of any thickness (metalled/concrete) for one HT cable					
	a)	Main Road	0.2	Km			
	b)	Service Road	6	Km			
	c)	Road Berm/Stone/Brick footpath/C.C Slab/Approach gate	35	Km			
8		Road cut of any thickness (metalled/concrete) for additional HT cable					
	a)	Main Road	0.2	Km			
	b)	Service Road	0.8	Km			
	c)	Road Berm/Stone/Brick footpath/C.C Slab/Approach gate	2	Km			
9		Supply and laying HDPE pipes ISI marked PN-4 class of size 125 mm dia (OD) across Road / Service Road by Trenchless Technology in various Roads/ Service Road/ Main Gate in NDMC area.	20	Km			

10		Supplying and making of H.S. type st. Th. Joist Boxes suitable for H.T. XLPE 11 KV cable of size 400 sq.mm/3 C	450	Each				
11		Supplying and making of H.S. type indoor end termination kits suitable for H.T. XLPE 11 KV cable of size 400 sq.mm/3 C	254	Each				
12		Excavation of earth including filling, watering, restoring the site to the original condition						
	a)	Soft soil	50	CU.m				
	b)	Hard soil/Rocky soil	20	CU.m				
13		Ground Penetrating Radar (GPRS) for laying of 11 kV HT Cable 400 Sq. mm/3C in NDMC Area	89	Km				
<b>Grand total</b>								

**Part C- Laying of LT cable**

<b>S.No.</b>		<b>Description of Item</b>	<b>Qty.</b>	<b>Unit</b>	<b>Rate</b>	<b>GST</b>	<b>Total Amount</b>
1		Laying of PVC/XLPE insulated power cable of 1.1 KV grade of the following sizes direct in <b>Soft Soil</b> including the excavation, sand cushioning, protective covering & refilling the trench as per specifications.					
	a)	Up to 25 sqmm/3 ½ C	2.0	Km			
	b)	Above 25 sqmm /3 ½ C up to 95 sqmm/ 3 ½ C	3.5	Km			
	c)	Above 95 sqmm/3 ½ C to 185 sqmm/ 3 ½ C	4.8	Km			
	d)	Above 185 sqmm/3 ½ C to 400 sqmm/ 3 ½ C	48.5	Km			
2		Laying of PVC/XLPE insulated power cable of 1.1 KV grade of the following sizes direct in <b>Hard/ Rocky Soil</b> including the excavation, sand cushioning, protective covering & refilling the trench as per specifications.					
	a)	Up to 25 sqmm/3 ½ C	0.8	Km			
	b)	Above 25 sqmm /3 ½ C up to 95 sqmm/ 3 ½ C	0.7	Km			
	c)	Above 95 sqmm/3 ½ C to 185 sqmm/ 3 ½ C	0.8	Km			

		1/2 C					
	d)	Above 185 sqmm/3 1/2 C to 400 sqmm/ 3 1/2 C	20	Km			
3		Laying of additional PVC insulated cable of 1.1 KV grade of the following sizes in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench as per specifications in <b>Soft Soil</b>					
	a)	Up to 25 sqmm/3 1/2 C	0.3	Km			
	b)	Above 25 sqmm/ 3 1/2 C up to 95 sqmm/ 3 1/2 C	0.4	Km			
	c)	Above 95 sqmm/3 1/2 C up to 185 sqmm/3 1/2 C	0.6	Km			
	d)	Above 185 sqmm/3 1/2 C to 400 sqmm/ 3 1/2 C	8	Km			
4		Laying of additional PVC insulated cable of 1.1 KV grade of the following sizes in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench as per specifications in <b>Hard/ Rocky Soil</b>					
	a)	Up to 25 sqmm/3 1/2 C	0.1	Km			
	b)	Above 25 sqmm/ 3 1/2 C up to 95 sqmm/ 3 1/2 C	0.2	Km			
	c)	Above 95 sqmm/3 1/2 C up to 185 sqmm/3 1/2 C	0.2	Km			
	d)	Above 185 sqmm/3 1/2 C to 400 sqmm/ 3 1/2 C	2	Km			



5		Handling/laying of PVC/XLPE cables of Grade 1.1 KV which are not necessarily laid in ground but part of it going up to pole/panel/pillar & part in the building in open trench/pillar/panel or otherwise					
	a)	Up to 95 sqmm/3 ½ C	0.5	km			
	b)	LT cable above 95 sqmm/3 ½ C up to 400 sqmm/3 ½ C	1.4	km			
6		Drawing of XLPE/PVC cables of grade 11KV/1.1 KV in existing RCC Pipe/HDPE Pipe/Subway/close Duct					
	a)	Up to 25 sqmm/3 ½ C/3C	0.6	km			
	b)	Above 25 sqmm/3 ½ C upto 95 sqmm/3 ½C	0.9	km			
	c)	Above 95 sqmm/3 C ½ upto 185 sqmm/3 ½ C	1.2	Km			
	d)	Above 185 sqmm/3C½ upto 400 sqmm/3 ½	18	Km			
7		Road cut of any thickness (metalled/concrete) for one cable					
	a)	Main Road	0.1	Km			
	b)	Service Road	2	Km			
	c)	Road berm/stone footpath/brick footpath/C.C. Slab/ Approach Gate	67.90	Km			
8		Road cut of any thickness (metalled/concrete) for additional cable					
	a)	Service Road	2.3	Km			
	b)	Road berm/stone footpath/brick footpath/C.C. slab/Approach gate	7.0	Km			

9		Supply and laying ISI marked PN-4 class HDPE pipes of following size across Road / Service Road by Trench less Technology in various Roads/ Service Road/ Main Gate in NDMC area.					
	a)	110 mm Dia (OD)	2	Km			
	b)	125 mm Dia (OD)	17	Km			
10		Supplying and making HS type straight through joint suitable for 1.1 KV grade PVC/XLPE cable of following size.					
	a)	16 sq.mm/ 4C	5	Each			
	b)	25 sq.mm/ 3.5C	5	Each			
	c)	50 sq.mm/ 3.5C	5	Each			
	d)	95 sq.mm/ 3.5C	8	Each			
	e)	185 sq.mm/ 3.5C	15	Each			
	f)	400 sq.mm/ 3.5C	300	Each			
11		Excavation of earth including filling, watering and restoring site to its original condition.					
	a)	Soft Soil	10	P. cum			
	b)	Hard Soil /Rocky Soil	4	P. cum			

12		Ground Penetrating Radar Survey (GPRS) for laying of LT cables of Various size in NDMC Area	100.10	Km			
<b>Grand total</b>							

<b>Part " D"</b>			
	<b>Sr No.</b>	<b>Description</b>	<b>Amount</b>
	1	PART- A - Supply of H.T & L.T Cables.	
	2	PART B - Laying of H.T Cables	
	3	PART C - Laying of L.T Cables	
	4	<b>Total Amount = Part "A"+ Part "B" + Part "C"</b>	

- Note:-
- 1 (Part "D")Total amount (Rs.)= Part "A"+ Part "B" + Part "C"
  - 2 The L-1 bidder shall be decided on the basis of Part "D"