



Bharat Sanchar Nigam Limited (Electrical Wing)

O/o The Superintending Engineer (E)
BSNL Electrical Circle-II
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E-TENDER DOCUMENT

Name of work:- Providing Electrical Installation, AFD,CCTV, Networking & Access control system for the proposed CNOC at 5th floor of Haddows Road T E Bldg, Chennai. (SW:- Providing Access control and CCTV)

NIT No: 20 / EE-T/EC-II/CH/2025-26

This tender document contains **37 (Thirty seven)** pages only.

For E Tender Helpdesk Pls Contact: [https:// etenders.gov.in](https://etenders.gov.in).

Ph: 0120-4200462/4001002/4001005/6277787

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INDEX

Sl.no	Description	Page no.
1	Front cover and Index	2
2	Notice Inviting Tender form - BSNL EW 6	3
3	General Instructions to the Bidders	9
4	Undertaking to abide by EW 6 & EW 8 (Form 'A') & EPF	11
5	Undertaking regarding ESI provisions	12
6	Performance report of works (Form 'C') & No Near relative working certificate (Form 'D')	13
7	Model form of Bank Guarantee for EMD (Annexure-I)	14
8	Model form of Performance security Guarantee bond (Annexure-II)	15
9	Important Instructions to tenderer	16
10	Schedule of Quantities	19
11	Specifications of work	23
12	List of Approved Makes	34
13	List of relevant Indian Standards	36
14	Proforma Schedules	37
15	BSNL EW – 8 form	38

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR E-TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE

The **Executive Engineer (EP & Tender)**, **BSNL, Electrical Circle-II**, Chennai on behalf of the CMD, Bharat Sanchar Nigam Limited, invites online Item rate bids from eligible bidders in Single bid system for the following work:

NIT No: 20/ EE-T/EC-II/CH/2025-26

1	Name of work	"Providing Electrical Installation, AFD, CCTV, Networking & Access control system for the proposed CNOC at 5th floor of Haddows Road T E Bldg, Chennai. (SW:- Providing Access control and CCTV)"
2	Estimated cost put to tender (Rs.)	Rs.5,67,315 /- (incl GST)
3	Earnest Money (Rs.)	Rs.11,346 /-
4	Period of completion	30 Days
5	Last date & time for downloading of tender document by bidder	Up to 15.00 Hrs. on 16.07.2025
6	Last date & time for online submission of tender	Up to 15:00 Hrs 16.07.2025
8	Date and time for opening of tender	15:30 Hrs. on...17.07.2025
9	Tender cost (Non-refundable)	Rs.590/- (500/- (+) GST 18%)

ELIGIBILITY CRITERIA

1. Eligibility Criteria: -

General: The Contractors satisfying the following shall be eligible to bid.

(a) Financial Norms:

Average annual turnover during the last 3 years, ending 31st March of the previous financial year, should be at least 30% of the estimated cost put to tender.

AND

(b) Physical Norms:

1) BSNL enlisted contractors in the Electrical category of respective class as per their tendering limits

OR

2) Dealer/Reseller/Distributor of major components of the schedule. The letter of Authorization in Original from the manufacturer will have to be produced by the dealers/Resellers/Distributors.

OR

3) Vendor/System integrator in the field of networking having carried out similar work(s) in BSNL/for BSNL in client location/in any central/State government organization/PSU's during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following:-

Three similar successfully completed works costing not less than the amount equal to 40% of the estimated cost put to tender

OR

Two similar successfully completed works costing not less than the amount equal to 60% of the estimated cost put to tender with equipment

OR

One similar successfully completed work costing not less than the amount equal to 80% of the estimated cost put to tender equipment

Note:

1) Similar work means Supply and Installation of Access control / CCTV etc., Major components means Access control / CCTV. Decision of the tender opening authority/committee is final.

IMPORTANT NOTE:

1. The self-attested copies of the following documents shall be scanned and uploaded to the e-tendering website within the period of tender submission. Online bid documents submitted by intending bidders shall be opened only of those bidders, who have scanned and uploaded the following documents (and whose uploaded documents are found to be in order), otherwise the bid will not be opened and shall lead to disqualification.

- a. Tender Fee in the prescribed format
- b. EMD in the prescribed format (Declaration as per Annexure III)
- c. Certificate of Financial Turnover from Chartered Accountant (Not applicable for BSNL enlisted Electrical contractors)
- d. Documents fulfilling Eligibility criteria (Please note that in case the bidder is authorised by the manufacturer, the original authorisation letter is to be scanned and uploaded)
- e. Enlistment certificate issued by BSNL, if applicable
- f. Valid Electrical license issued by licensing authority, Govt. of Tamil Nadu
- g. GST Registration Number Details, as applicable
- h. PAN Card
- i. EPF and ESI Registration certificate
- j. Undertaking to abide by EW-6 and EW-8 (Form 'A')
- k. Undertaking regarding EPF and ESI provisions (Form 'B')
- l. Certificate of work experience issued by client department (Form 'C') if applicable
- m. Undertaking regarding No Near relative working certificate (Form 'D')

Not uploading the above documents, (even if the documents are submitted physically) shall lead to disqualification.

2. The Physical Tender Fee, EMD, the original authorisation letter by the manufacturer (wherever applicable), (the scanned copies of which are uploaded) shall be deposited in the tender box available in the office of tender opening authority, by the bidder on or before 15.00 hours of the tender opening date, failing which the tender will not be considered for further processing.

BSNL EW-6
Bharat Sanchar Nigam Limited
Electrical Wing

Electrical Division: ED-I, Chennai

Sub Division: **BSNL ESD-III, Chennai**

Item rate tenders on single bid system are invited on behalf of CMD, BSNL for the work **"Providing Electrical Installation, AFD, CCTV, Networking & Access control system for the proposed CNOC at 5th floor of Haddows Road T E Bldg, Chennai. (SW: Providing Access control and CCTV)"** from the eligible bidders as per NIT notification. The enlistment of the bidders should be valid on the opening date of tender. In case the date of opening of tender is extended, the enlistment of bidder should be valid on the original date of opening of tender.

1. Intending bidder is eligible to submit the bid provided that he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority as per the eligibility conditions mentioned in the NIT notification page.
2. The work is estimated to cost **Rs.5,67,315 /- (incl GST)**
3. Agreement shall be drawn with the successful bidder on prescribed form as amended up to the date of opening of tender. Bidder shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
4. The time allowed for carrying out the work will be **30 Days** from the 10th day after the date of written order to commence the work.
5. The site for the work is available / or the site for the works shall be made available in parts. The successful bidder shall execute the work in coordination with other agencies working in the campus.
6. The bid documents consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website <https://etenders.gov.in> at free of cost. The BSNL EW-8 document can be seen from the web site www.chennai.bsnl.co.in at free of cost.
7. After submission of the bid, the bidder can re-submit revised bid any number of times but before last time and date of submission of tender as notified. While submitting the revised bid, bidder can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of tender as notified.
8. The Tender Fee in the form of Demand Draft issued by the Nationalized / Scheduled bank authorized by the Reserve Bank of India, drawn in favour of BSNL, CHENNAI TELEPHONES payable at CHENNAI shall be scanned & uploaded in the e-tendering website within the period of tender submission. The validity of the tender cost in the form of DD shall be **60 days** from the date of opening.
9. The Earnest money deposit (EMD) in the form of Demand Draft / FDR / BG (BG is only for Air Conditioning, Diesel Engine Alternator, Lifts, and Sub Station works wherever the amount of EMD is more than Rs.20,000)/ CDR of a nationalized / scheduled bank authorized by the Reserve Bank of India, drawn in favour of BSNL, CHENNAI TELEPHONES payable at CHENNAI shall be scanned & uploaded in the e-tendering website within the period of tender submission. The validity of the EMD in the form of DD shall be **60 days** from the date of

- opening. If the EMD is in the form of CDR/FDR/BG, the validity shall be **180 days** from the date of opening. In case of L1 bidder, the validity of CDR/FDR/BG is to be extended up to the observation period as that of the Performance guarantee / Security deposit.
10. The Physical **TENDER COST** and **EMD** of which the scanned copy is uploaded shall be deposited by all the bidders before 3:00 PM on the tender opening date, failing which the tender shall not be opened.
 - ~~11. Interested bidder who wishes to participate in the bid shall pay the e-tender processing fee to M/s. ITI Limited through their e-gateway by credit / debit card / internet banking / RTGS / NEFT facility.)~~[CLAUSE DELETED]
 12. All the documents as specified in the tender document shall be scanned and uploaded to the e-Tendering website within the period of bid submission.
 13. Online bid documents submitted by intending bidders shall be opened only of those bidders, who have deposited e-Tender Processing Fee with M/s ITI Limited and Earnest Money Deposit and other documents fulfilling eligibility criteria, scanned and uploaded are found in order.
 14. The last date for online submission of bid **...16.07.2025 up to 3:00 PM** and the bid submitted shall be opened at **03:00 PM on 17.07.2025** If a holiday is declared on the tender opening day, the tender will be opened on the next working day.
 15. The e-Tender processing fee is non-refundable.
 16. **Performance Guarantee:** The bidder is required to furnish Performance guarantee for an amount equal to 5% of the contract value in the form of bank guarantee/CDR/FDR/DD (of a nationalized/ Scheduled Bank in a standard format) within two weeks from the date of issue of acceptance letter. This period can be further extended by the Engineer-in-charge up to a maximum period of two weeks on written request of Bidder. The validity period of the performance security in the form of performance bank guarantee shall be: Three Months from the date of actual completion of work, for AMC works; and One year from the date of actual completion of work for all other works. **In case the bidder fails to deposit the said performance guarantee within the stipulated period, including the extended period if any, the Earnest Money deposited by the bidder shall be forfeited automatically without any notice to the bidder and the bidder will not be allowed to participate in the re tendering for the same work.**
 17. **Security Deposit:** In addition to Performance guarantee stated above, a sum @ 10% of the gross amount of the bill shall be deducted from each running bill of the contractor till the sum be deducted with the sum already deposited as earnest money, will amount to security deposit of 5% of the contract value of the work. **The security deposit shall be released after an observation period as follows: Three Months from the date of actual completion of work, for AMC works; and One year from the date of actual completion of work for all other works.**
 18. In case any discrepancy is noticed in the documents as uploaded at the time of submission of the bid online, then the bid submitted shall become invalid and the BSNL shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further, the bidder shall not be allowed to participate in the retendering process of the work.
 19. Intending bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders, the form and nature of the site, the

means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & 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 bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the BSNL and local conditions and other factors having a bearing on the execution of the work.

20. The competent authority on behalf of the CMD does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected. The competent authority on behalf of CMD reserves to himself the right of accepting the whole or any part of the tender and the bidder shall be bound to perform the same at the rate quoted.
21. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the bidders who resort to canvassing will be liable to rejection.
22. Agreement shall be drawn with the successful bidder on prescribed form. Bidder shall quote his rates as per various terms and conditions of the said form, which will form part of the agreement.
23. The bidder should give a certificate as per the following that none of his/her relative is employed in BSNL units as per **Form 'D'**. In case of proprietorship firm, certificate will be given by the proprietor and for partnership firm certificate will be given by all the Directors of the company.
 - a. Near relatives of all BSNL employees either directly recruited or on deputation are prohibited from participation in tenders and execution of works in the different units of BSNL. The near relatives for this purpose are defined as:
 - i. Members of a Hindu Undivided family.
 - ii. They are husband and wife.
 - iii. The one is related to the other in the manner as father, mother, son(s) & son's wife(daughter-in-law), Daughter(s) & daughter's husband(son-in-law), brother(s) & brother's wife, sister(s) & sister's husband(brother -in-law).
 - b. The company or firm or any other person is not permitted to tender for works in BSNL unit in which his near relative(s) is(are) posted. The unit is defined as SSA/Circle/Chief Engineer/Chief Archt./Corporate office for non-executive employees and all SSA in a circle including circle office/Chief Eng./Chief Archt./Corporate office for executive employees (including those called as Gazetted officers at present). The bidder should give a certificate that none of his/her such near relative is working in the units as defined above where he is going to apply for tender/work, for proprietorship, partnership firms and limited company certificate shall be given by the authorized signatory of the firm. Any breach of these conditions by the company or firm or any other person,

- the tender/work will be cancelled and earnest money/performance guarantee will be forfeited at any stage whenever it is so noticed. BSNL will not pay any damages to the company or firm or the concerned person. The company or firm or the person will also be debarred for further participation in the concerned unit.
- c. No employee in BSNL/ Govt. of India is allowed to work as a contractor for a period of two years of his retirement from service without the prior permission. The contract is liable to be cancelled if either the bidder or any of his employees is found at any time to be such a person who had not obtained the permission as aforesaid before submission of tender and engagement in the bidders service.
24. The tender for the work shall remain open for acceptance for a period of ninety (90) days from the date of opening of tenders. If any bidder withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the BSNL, then the BSNL shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the retendering process of the work.
25. The agency has to comply with the provisions of EPF and miscellaneous provisions Act-1952 and employees provident fund scheme-1952 as amended up to date in respect of labours/employees engaged by them for this work. Any consequence arising due to non-complying of provisions as specified above shall be the sole responsibility of the firm only. The agency shall give an undertaking to this effect as per **Form 'B'**.
26. **Extension of Validity of tender:** In case, where the letter of award of work cannot be placed within the validity period of the tender, the BSNL can request the bidder to extend the validity of their respective tenders and the Earnest Money deposit by a reasonable period. In such cases, extension of validity of Earnest Money deposit by 30 days beyond the extended validity date of tender should also be asked for. While BSNL can make the request for extension, the tenderer is free to either extend the validity or refuse the request to extend the validity.
27. Rates quoted by the contractor shall be firm and shall be valid for the currency of contract. No cost escalation shall be permitted during the currency of contract.
28. This notice inviting tender shall form a part of the contract document. The successful bidder, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-
- a. The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tender, subsequent amendments issued and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
 - b. Standard BSNL EW-8 form.

GENERAL INSTRUCTIONS TO THE BIDDERS

1. The intending bidder must read the terms and conditions of BSNL-EW 6 carefully. He should only submit his bid, if he considers himself eligible and he is in possession of all the documents required.
2. Information and instructions for bidders posted on website shall form part of bid document.
3. Applicants are advised to keep visiting the above mentioned website from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respect including updates thereof, if any. An incomplete application may be liable for rejection.
4. Those bidders not registered on the website mentioned above, are required to get registered themselves beforehand. The intending bidder must have valid class-III digital signature to submit the bid.
5. On opening date, the bidder can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
6. Bidder can upload eligibility documents in the form of JPG format or / and PDF format. Documents uploaded in any other format, which could not be opened may result in non opening of the bids.
7. Bidder must ensure to quote rate of each item. The column meant for quoting rate in figures appears in yellow colour. In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0".Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO)
8. Even though any bidder may satisfy the above requirements, he would be liable to disqualification if he has:
 - a. Made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the eligibility criteria document.
 - b. Record of poor performance such as abandoning work, not properly completing the contract, or financial failures / weaknesses etc.
9. If any information furnished by the bidder is found incorrect at a later stage, he shall be liable to be debarred from tendering/taking up of works in BSNL. The BSNL reserves the right to verify the particulars furnished by the applicant independently.
10. GST and any other taxapplicable in respect of this contract as applicable shall be borne by the bidder himself. The bidder shall quote his rates considering all such taxes. The TDS as per the Govt. regulations will be recovered from the contractor.
11. **Tender Evaluation :**
 - (a) The evaluation and comparison of responsive bids shall be done on the basis of **Net cost to BSNL** on the prices offered inclusive of packing, forwarding, freight and insurance charges etc., but excluding GST. The bid with lowest net cost as elaborated above will be the L1 bidder.
 - (b) Vendors should furnish the correct GST Rate in the price schedule. If the Input Tax Credit is found to be not admissible at any stage subsequently owing to wrong furnishing of GST Rate, then the vendors will be liable to refund such non-admissible amount, if already paid, along with penalty if charged by the concerned authority.

12. However, pursuant to the constitution (Forty-sixth amendment) act, 1982, if any further tax or levy is imposed by statute, after the last date of receipt of tenders, and the contractors there upon necessarily and properly pays such taxes/ levies, the contractor shall be reimbursed the amount so paid, provided such payment, if any, is not in the opinion of Superintending engineer (whose decision shall be final and binding) be attributable to delay in execution of work within the control of contractor.

13. The Contractor shall, within a period of 30 days of imposition of any further tax or levy in pursuant to the constitution of (Forty sixth amendment) act 1982 give a written notice thereof to the Engineer-in-charge that the same is given pursuant to this condition, together with all necessary information relating thereto.

14. Bye laws Indemnity against liabilities:

- a. The bidder shall comply with all by laws and regulations of the local and statutory authorities having jurisdiction over the works and shall be responsible for payment of all fees and other charges and giving and receiving all necessary notices and keep the Engineer-in-charge informed about the notices issued and received.
- b. The bidder shall indemnify the department against all claims in respect of patent rights design, trademark or name of other protected rights in respect of any plant, machine, work or materials used for or in connection with the works or temporary works and from and against all claims demands, proceedings, costs, charges and expenses whatsoever in respect of or in relation thereto.
- c. The bidder shall defend all actions arising from such claims and shall himself pay all royalties, License fees, damages, costs and charges of all and every sort that may be legally incurred in respect hereof shall be borne by the bidder.
- d. All liabilities / penal recoveries on matters arising out of tax/levies such as incorrect deductions discrepancies in the filing of returns, revised assessments by the concerned authorities etc., shall be borne by the bidder.

15. Termination of contract on death of contractor :

Without prejudice of any of the rights or remedies under this contract, if the contractor dies, the Engineer in charge on behalf of the BSNL shall have the option of terminating the contract without compensation to the contractor.

16. Indulging of contractor in criminal /antisocial activities and cases under investigation/charge sheeted by CBI or any other government agencies etc. :

If the CBI/Independent External Monitor (IEM) /Income tax/ Sales Tax /GST/Central Excise/Custom Departments recommend such a course - Action will be taken as per the directions of CBI or concerned department.

17. As a general notion, the terms and conditions/instructions contained in various pages of this document are addressed assuming the bidder as 'Male'. However, the same shall remain and assumed to be addressed in case of 'Female' bidder also, except for the gender centric words, which shall be 'female' centric at appropriate places.

FORM 'A'

Undertaking to abide by EW 6 & EW 8

"I.....Son of
.....Resident of hereby give an
undertaking that I have read the complete bid document and I am aware of all the clauses and
sub clauses of BSNL EW 6 & 8 forms and I confirm that I will abide by all the terms and conditions
available in original standard BSNL EW 6 & 8 forms.

(Seal of the firm)

(Signature of Bidder)

FORM 'B'

Undertaking regarding EPF provisions

"I..... Son of
.....Resident of hereby give an
undertaking that

* I/ We have registered as per the EPF and Miscellaneous provisions Act, 1952 and our
registration no is ----- We undertake to keep it valid during the currency of contract.

In case at any stage, it is found that the information given by me is false / incorrect, BSNL
shall have the absolute right to take any action as deemed fit/without any prior intimation to
me".

* strike out whichever is not applicable

**Attach a self-attested photo copy of the above said EPF registration certificate.

(Seal of the firm)

(Signature of Bidder)

Undertaking regarding ESI provisions

"I..... Son of
.....Resident of hereby give an
undertaking that

* I/ We have registered as per the ESI and Miscellaneous provisions Act, 1948 and our registration no is ----- . We undertake to keep it valid during the currency of contract.

In case at any stage, it is found that the information given by me is false / incorrect, BSNL shall have the absolute right to take any action as deemed fit/without any prior intimation to me".

* strike out whichever is not applicable

** Attach a self-attested photo copy of the above said ESI registration certificate.

(Seal of the firm)

(Signature of Bidder)

FORM 'C'

Performance report of works

1. Name of work
2. Agreement no.
3. Final Value of Work Done
6. Date of start
7. Actual date of completion
8. Performance: Satisfactory / Not Satisfactory

Dated:

Executive Engineer or Equivalent /above

FORM 'D'

No Near relative working certificate

*
I..... Son /Daughter of Shri.....Resident of..... hereby certify that none of my relative(s) as defined in the tender document is/are employed in BSNL unit as per details given in tender document

OR

* Following are the details of near relatives working with the BSNL

SI No	Name of the relative	Designation	Name of the Unit (Office & section of BSNL) where working

*Strike off whichever is not applicable

. In case at any stage, it is found that the information given by me is false / incorrect, BSNL shall have the absolute right to take any action as deemed fit/without any prior intimation to me.

(Seal of the firm)

(Signature of Bidder)

ANNEXURE I

**MODEL FORM OF BANK GUARANTEE
(For submitting EMD)**

Whereas_____ (hereinafter called "the contractor(s)")
has submitted its Tender dated_____ for the work _____

KNOW ALL MEN by these presents that WE _____
OF _____ having our registered office
at _____ (hereinafter called "the Bank") are bound unto
_____ (hereinafter called "the BSNL") in the sum of
_____ for which payment will and truly to be made of the said BSNL,
the Bank binds itself, its successors and assigns by these presents.

THE CONDITIONS of the obligation are:

1. If the Contractor(s) withdraws its Tender during the period of Tender validity specified on the Tender Form: or
2. If the Contractor(s) having been notified of the acceptance of its Tender by the BSNL during the period of Tender validity.

(a) Fails or refuses to execute the Contract.

(b) Fails or refuses to furnish security Deposit in accordance with the conditions of Tender document.

We undertake to pay to the BSNL up to the above amount upon receipt of its first written demand, without the BSNL having to substantiate its demand, provided that in its demand, the BSNL will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force as specified in the Tender Document up to and including Thirty (30) days after the period of the Tender validity and any demand in respect thereof should reach the Bank not later than the specified date/dates.

Signature of the Bank

Signature of the Witness

Name of Witness

Address of Witness

ANNEXURE II

PERFORMANCE SECURITY GUARANTEE BOND

In consideration of the CMD, BSNL (hereinafter called 'BSNL') having agreed to exempt _____ (hereinafter called 'the said bidder(s)') from the demand under the terms and conditions of an agreement/Advance Purchase Order No _____ dated _____ made between _____ and _____ for the supply of _____ (hereinafter called "the said agreement "), of security deposit for the due fulfillment by the said bidder (s) of the terms and conditions contained in the said Agreement, on production of the bank guarantee for _____ we, (name of the bank) _____ (hereinafter refer to as "the bank") at the request of _____ (bidder(s)) do hereby undertake to pay to the BSNL an amount not exceeding _____ against any loss or damage caused to or suffered or would be caused to or suffered by BSNL by reason of any breach by the said Bidder(s) of any of the terms or conditions contained in the said Agreement.

2. We (name of the bank) _____ do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the BSNL by reason of breach by the said bidder(s)' of any of the terms or conditions contained in the said Agreement or by reason of the bidders(s)' failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee where the decision of BSNL in these counts shall be final and binding on the bank. However, our liability under this guarantee shall be restricted to an amount not exceeding _____.

3. We under take to pay to the BSNL any money so demanded notwithstanding any dispute or disputes raised by the bidder(s)/supplier(s) in any suit or proceeding pending before any court or tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the bidder(s)/supplier(s) shall have no claim against us for making such payment.

4. We(name of the bank)_____ further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the BSNL under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till _____ (office/BSNL) BSNL certifies that the terms and conditions of the said Agreement have been fully or properly carried out by the said bidder(s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the expiry of TWO/TWO AND HALF/THREE YEARS (as specified in P.O) from the date hereof, we shall be discharged from all liabilities under this guarantee thereafter.

5. We (name of the bank)_____ further agree with the BSNL that the BSNL shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said bidder(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the BSNL against the said Bidder(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Bidder(s) or for any forbearance, act or omission on the part of the BSNL or any indulgence by the BSNL to the said Bidder(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 Bidder(s)/supplier(s).

7. We (name of the bank) _____ lastly undertake not to revoke this guarantee during its currency except with the previous consent of the BSNL in writing.

Dated the _____ day of _____

for _____ (indicate the name of bank)

IMPORTANT INSTRUCTIONS TO THE TENDERERS

Please note that the offers, which do not comply the following, will not be considered and will be totally rejected. These instructions supersede the BSNL/EW 8 clauses in case of any Disparity.

1 (i) INCREASE /DECREASE OF TENDERED QUANTITY

a) BSNL will have the right to increase or decrease up to 25% of the Contract value depending upon the requirement of goods and services specified in the schedule of items without any change in the unit price or other terms and conditions at the time of award of contract.

b) In exceptional situation where the requirement is of an emergent nature and it is necessary to ensure continued supplies from the existing vendors, the purchaser reserves the right to place repeat orders up to 50% of the quantity of goods and services contained in the running tender/contract within a period of 12 months from date of award of work at the same rate or a rate negotiated (downwardly) with the existing vendors considering the reasonability of rates based on prevailing market conditions and the impact of reduction in duties and taxes etc.

1 (ii) CURTAILMENT OF QUANTITY:-

BSNL reserves the right to enforce curtailment in the assigned quantum of work for any contractor on the grounds of defaults/delay in regard to execution of the individual work assigned.

2) COMPLETION OF WORK:-

At the time of issuing NIT for a particular work, the time allowed for completion of work consistent with magnitude and urgency of work is specified. The time allowed for carrying out the work as entered in the contract is reckoned from the tenth day after the date on which the orders to commence the work are given to the Contractor. To ensure good progress of the work during the execution, the contractor is bound in all cases in which the time allowed for any work exceeds one month (except special jobs) to complete 1/8th of the whole of the work before 1/8th of the time allowed under the contract has elapsed, 3/8th of the work before half of the time has elapsed and 3/4th of the work before 3/4th of such time has elapsed. However, for special jobs, if a time schedule has been submitted by the Contractor and the same has been accepted by the Engineer-in-charge, the contractor shall comply with such time schedule. For Substation, the work is deemed to have been completed after clearance by Electrical Inspector.

3) EXTENSION OF TIME:-

If the contractor shall desire an extension of time for completion of work on the grounds of his having been unavoidably hindered in its execution or on any other grounds, he shall apply in writing to the Engineer in charge within 30 days of the hindrance on the account on which he desires such extension as aforesaid, and the Engineer in charge shall if in his opinion reasonable grounds to be shown therefore, authorize such provisional extension of time, if any as in his opinion be necessary are proper.

4) **COMPENSATION FOR DELAY :**

If the contractor fails to maintain the required progress or complete the work and clear the site on or before the contract or extended date of completion, he has to pay the compensation for delay which is limited to 0.5% per week of the tendered value for the first 10 weeks and 0.7% per week for next 10 weeks and thereafter subject to a maximum of 12% of the tendered value for the location where the work is delayed and the firm is found responsible for the same. The clause 2 of BSNL - 8 forms stands modified accordingly. Flow chart of the Procurement process/ contract shall be supplied by the contractor and approved by Executive Engineer concerned.

5) **TERMS OF PAYMENT:**

Quarterly Payment shall be made after completion of quarterly maintenance period. With each bill, a certificate from the Contractor that maintenance has been carried out properly and testing / drills etc. required during the period have been performed in addition to the penalty explicitly indicated under penalty clauses.

6) **EPF PROVISIONS:-**

The agency has to comply with the provisions of EPF and miscellaneous provisions Act-1952 and employees provident fund scheme-1952 as amended up to date in respect of labours /employees engaged by them for this work. Any consequence arising due to non- complying of provisions as specified above shall be the sole responsibility of the firm only.

Agency has to observe all the labour rules & regulation in force. Agency shall be fully responsible for any violation observed at any time.

7) **PROGRAMME FOR EXECUTION**

The firm shall supply detailed programme to Engineer-in-Charge for execution of contract within fifteen days of award of work. The programme shall contain details about submission of drawing, supply of materials, tentative dates for installation and commissioning.

8) **STORES AND SAFETY**

All the stores and materials required for the satisfactory completion of the work shall be arranged at work site by the contractor from his own source. Space for storing the same materials may be provided on request from the contractor. However safe custody of the material stores at site will be responsibility of the contractor.

9) **CO-ORDINATION AT SITE**

At the site of work more than one agency may be working. Full cooperation shall be extended to other agencies during the progress of work. Further work shall be carried out in such a way so that it may not cause abnormal noise and hindrance to the officers of the BSNL engaged in erection as well as to normal routine work.

10) COMPLETION DRAWINGS

The firm shall supply three sets of drawings/documents after completion of the work but before the proposed date of completion of work.

- ❖ Schematic diagram.

11) CHANGES IN SPECIFICATIONS

The BSNL reserves the right to make changes in respect of specifications of work if in its opinion same is found necessary. However such alterations shall be made after mutual discussions and agreement between the BSNL and the contractor. Any price implications in this regard shall be mutually discussed and agreed up on in terms of clause 12 of EW forms. The BSNL as matter of principle will not permit modifications by the contractor in design /specifications of any document /material. However the same can be agreed upon by the BSNL under exceptional circumstances where

- i. The same is necessitated due to non-availability of material/components of certain specifications/make.

(or)

- ii. Such alterations constitute an improvement in the opinion of BSNL.

Prior approval is necessary before undertaking any alteration/modification in the specifications of the equipment.

12) I.S. Standards:

The entire system shall conform to relevant BIS including safety standards as amended up to date. Where IS standards are not available the British standard(s) shall be followed. In case of conflict, the requirements of these specifications shall be given over-riding priority. The electrical and earthing work shall be carried out as per CPWD specifications for electrical works (internal) and electrical works (external) as amended up to date. A list of relevant standards, approved makes of equipment is furnished and forms part of the tender document.

Name of work:- Providing Electrical Installation, AFD,CCTV, Networking & Access control system for the proposed CNOC at 5th floor of Haddows Road TE Bldg, Chennai.(SW:- Providing Access control and CCTV)

Name of work: Providing Electrical Installation, AFD, CCTV, Networking & Access control system for the proposed CNOC at 5th floor of Haddows Road T E Bldg, Chennai. (SW:- Providing Access control and CCTV)										
Sl No.	Description of Item	Qty	Rate	Unit	Total Amount Excl GST	CGST		SGST		Total Amount including GST
1	2	3	4	5	6	7	8 = 6x7	9	10 = 6x9	11= (6+8+10)
SH-I	ACCESS CONTROL SYSTEM									
1	MAIN ACCESS CONTROL PANEL: Supplying installation testing and commissioning of following Microprocessor based Access controllers for connecting the item such as card readers, Magnetic locks etc. with TCP/ IP Compatibility with suitable size MS powder coated enclosure, power supply units along with PSU, on-board additional Inputs/Auxiliary outputs and all accessories along with Tamper Protected casing as per the detailed technical specification attached. The Access controllers should be UL listed. The access controller is to be integrated with the analog addressable fire alarm system for operation.									
a	2 Card reader controller (Two door controller)	1		Each						
2	SMART CARD READERS: Supplying installation testing and commissioning of Smart Card readers with stainless steel base plate with base box i/c door interface module (if applicable), power supply unit etc. The read range shall be up to 125 mm for Doors. The reader log data should be transfer to server on real time basis.	2		Each						

Name of work:- Providing Electrical Installation, AFD,CCTV, Networking & Access control system for the proposed CNOC at 5th floor of Haddows Road TE Bldg, Chennai.(SW:- Providing Access control and CCTV)

3	Biometric Finger Print Reader: Supplying installation testing and commissioning of Biometric finger reader having inbuilt smartcard readers with pin pad complete with enclosure, protective cover to avoid scratching and all accessories i/c door interface module (if applicable), power supply unit etc. as per the detailed technical specification attached for Doors at Server room. The reader log data should be transfer to server on real time basis. The reader should be capable of both enrolment purpose and access control purpose.	2		Each						
4	SMART CARDS: Supplying installation testing and commissioning of Smart Cards, double side card holder and lanyard including printing on lanyard	50		Each						
5	EM-LOCK FOR DOORS: Supplying installation testing and commissioning of Electromagnetic Locks of 600 lbs holding force suitable for operating with 12/24V DC along with power supply and battery backup for 4 hours and Green /Red LED for indication UL listed as per the specification									
a	For double leaf doors	2		Each						
6	Supplying installation testing and commissioning of Exit Switch at the inside of Doors.	2		Each						
7	Supplying installation testing and commissioning of master switch for opening all access control doors in case of Emergency.	2		Each						
8	MAGNETIC CONTACT: Supplying installation testing and commissioning of Surface/ flush mounted type Magnetic Contact suitable for 5 million cycle operation etc as required.	4		Each						

Name of work:- Providing Electrical Installation, AFD,CCTV, Networking & Access control system for the proposed CNOC at 5th floor of Haddows Road TE Bldg, Chennai.(SW:- Providing Access control and CCTV)

9	Access & Security Management Software: Supply & License for Access Control Readers/Doors and Access Control System should be seamlessly Integrated and should have GUI system along with one client license to be installed at operator station.	1		Set						
10	SITC of Desktop PC with Intel core i7 processor, 16GB DDR4 RAM, 1TB storage, 21" monitor, keyboard, mouse, windows 11 operating system including installation, testing, commissioning etc., as reqd	1		Each						
11	Supplying and laying of the following size copper flexible cables for connecting reader/lock to controller including interconnections, testing etc., as reqd.									
a	2 core 0.5sqmm	100		mtr						
b	4 core 0.5sqmm	125		mtr						
c	8 core 0.5sqmm	100		mtr						
SH-II	CCTV SURVEILLANCE SYSTEM									
12	SITC of 16 Channel NVR with support upto 16Ch. third-party IP Camera Input, H.265/H.264 codec decoding, recording upto 8MP resolution, support upto 10TB HDD with 4 SATA interface, HDMI & VGA simultaneous video output, max 160Mbps incoming bandwidth, interface ports 2no RJ45, 2no USB, Power supply 240V AC, Network TCP/IP etc., as required.	1		Each						
13	Supplying and fixing of unmanaged PoE 8Port Gigabyte switch with 8xGigabit PoE ports, 2xGigabit uplink ports, port type RJ45, Max. Power supply 240V AC etc, as required.	2		Each						
14	Supplying and Fixing of 4MP IR Fixed Dome Network Camera with 1/2.8" Image Sensor, 2.8mm fixed lens, IR range up to 30 mtrs, support on board card slot upto 128GB, DWDR, video compression H.265/H.264 etc as required.	8		Each						

Name of work:- Providing Electrical Installation, AFD,CCTV, Networking & Access control system for the proposed CNOC at 5th floor of Haddows Road TE Bldg, Chennai.(SW:- Providing Access control and CCTV)

15	Supplying and fixing of 3.5" 6TB Hard disk, surveillance grade etc as required.	2		Each						
16	Supply, laying, and Termination of CAT 6 UTP Cable on surface of wall including making holes in the wall etc as required.	250		Mtrs						
17	Supply, Installation of 6U Rack with PDU, Fan, Lock & Key arrangement etc as required.	1		Each						
18	Supply, Installation of 42" LED Monitor on table/ on surface of wall including providing bracket etc as required	1		Each						
18	Supply and fixing of remote mouse for above DVR etc as required.	1		Each						
Total Excl GST						Total Excl GST				

IMPORTANT NOTES:-

1	The firm shall be responsible to ensure that GST shown in the above columns is correct & Input Tax Credit for the amount shown above is admissible as per GST Act as amended up to date".
2	Invoice /Bill should be pre-printed as per the GST format.
3	The evaluation and comparison of responsive bids shall be done on the basis of Net cost to BSNL on the prices offered inclusive of packing, forwarding, freight and insurance charges etc. but excluding GST
4	The rates for all items of work shall, unless clearly specified otherwise, include cost of all labour, materials and other inputs involved in the execution of the terms as specified in the scope of work.
5	No advance payments can be made. Stipulations like levy of interest if payment is not made in a specified time are also not acceptable and the payment is governed by the normal BSNL practice.
6	Bidders must mandatorily quote for all GST components (CGST, SGST and IGST) as applicable.
7	Bidders must mandatorily mention correct HSN / SAC Codes

SPECIFICATION

1 Scope of Work

The bidder shall Supply, Installation, Testing & Commissioning of Access Control system, IP CCTV System including cameras, Network video recorder system, Management servers, applications / software, access control system equipment, switches and any other items / accessories required for a fully functional system.

The number of cameras and their placement shall be decided in such a way that most critical areas can be monitored. Proximity card reader devices shall be placed as per site requirement. Multi-criteria detectors shall be placed in such a way all the areas to be covered.

2 Functional Requirements

2.1 Access Control System

Control and monitoring for security applies to all entry/exit doors and related areas. Access to buildings, gates, doors is restricted for unauthorized users. Card access system can offer facility managers the flexibility to control these access points.

Smart card reader shall be installed at entry to various rooms as per site requirement in 5th & 6th floor. Each door shall have a door locking mechanism, and a door status indicator. All exit gates shall be open able through push button switches.

In case of fire, the FAS, using addressable outputs shall directly release the door locks controlled by the Access control system.

- 2.1.1** The system shall provide a mean to control access through nominated doors having electric locking door status monitoring and access control readers. Access rights associated with a presented access card shall be checked for validity based on card or identifier, access area, access time and any other access management function defined in this specification; as stored in access controllers. Access shall be granted or denied, dependant on the access privilege. Access rights shall be programmed in a variety of ways to allow flexibility as defined elsewhere in this specification.
- 2.1.2** All system communications must be totally integrated with either existing or new LAN networks. Bidder must make themselves familiar with the specific requirements for this project.
- 2.1.3** Connection to Access Controllers shall be achieved using cabling supporting Ethernet and TCP/IP protocols.
- 2.1.4** All data communication internal to the system between Access Controller and the Server shall be on TCP/IP Network and should be encrypted and an industry-standard encryption algorithm to a minimum of 128 bit AES.
- 2.1.5** The system shall report all events to the operator(s) as configured and shall produce and maintain a log of all system events and alarms.
- 2.1.6** The system shall provide a means for an operator to extract information relative to the event log and system configuration and produce this information in the form of printed reports, screen displays etc.
- 2.1.7** Comprehensive backup and archiving facilities shall be incorporated as an integral part of the system software.
- 2.1.8** Access Controllers must support peer to peer communications for input and output communications between Access Controllers.
- 2.1.9** The Access Controller shall be of **UL listed**.

2.2 IP CCTV System

IP CCTV system shall enable centralized online surveillance of various selected areas and to generate a record for post event analysis. The camera shall be a high resolution, visible at low light capability. The recording shall be in real time motion i.e. 25 frames per second at D1 resolution for each camera. Recording videos shall be kept for 90 days with RAID5 configuration. The camera shall be ONVIF S and G compliant.

One Network Video recorder with required client license shall be used to record & playback the camera videos. All the live view or recorded videos of cameras shall be displayed through client software on proposed workstation.

As an application, the video surveillance will do the following:

- Providing real-time monitoring of a facility's environment, people and assets.
- Recording in case there is a motion in the room
- Recording events for subsequent investigation, proof of compliance / audit purposes
- Shall facilitate motion search on recorded video

~~2.3 Fire Alarm System~~

~~The proposed Fire Alarm System will be one loop intelligent addressable panel. The loop will consists of detectors & devices making it a total capacity of detectors / devices per panel. The fire alarm panel has a large display. The proposed panel shall be UL listed/FM approved. We have proposed intelligent Multi-criteria detectors on ceiling, on false ceiling wherever applicable & below false flooring. Addressable relay module & monitor modules are proposed in the system for monitoring as well as control requirement respectively. The fire alarm system shall use monitor modules / relay modules / control modules which will operate based on cross-zoning of detectors.~~

~~CODES AND STANDARDS~~

~~The entire installation shall be installed to comply with one or more of the following codes or Standards:~~

- NBC of India, 2016 amended up to date
- IS 2189.
- British Standards, BS 5839 Part 1 or BS 6266
- NFPA 72 Standards, US

Technical Specifications

1.1.1 Access Controller

The above Access control software shall be capable of monitoring; control of the system shall be powerful enough to enable security managers to manage their site's overall security. The Access Control System (ACS) shall be capable of integrating multiple building functions including access control, alarm management.

The system shall incorporate the necessary hardware, software, and firmware to collect, transmit, and process alarm, tamper and trouble conditions, access requests, and advisories in accordance with the security procedures of the facility. The system shall control the flow of authorized personnel traffic through the secured areas of the facility. The user interface at the host computer (server) shall be a mouse driven graphical user interface (GUI) allowing the user to open and work on multiple windows simultaneously.

- a) The Controllers shall be UL certified and conform to UL standards.
- b) Flash memory for easy online software updates.
- c) Supports two-man rule and escorted access for increased security
- d) Configurable audio tones to indicate valid card read, invalid card read, and other types

of events.

- e) Large alarm buffer protects integrity of alarm data
- f) Dynamic memory management allows maximum storage of card holders and transactions

1.1.2 **Proximity card readers ~~Biometric Fingerprint Card Reader & Enrolment Biometric Reader~~**

Reading element	: Optic sensor
Timing	: Card read < 0.5 sec
Output	: Same card data as in the Input in case of validation.

No data in case of no validation Access decisions shall be made at each controller.

Access criteria changes shall be downloaded from the controller automatically, according to a pre-programmed schedule.

All card readers shall unlock the controlled door within 0.2 seconds of the completion of the access attempt. The completion of the access attempt is defined as the end of the card shown for card only entry. This time delay shall never be exceeded, regardless of system loading.

The following fields shall be transmitted:

- Time of entry or exit
- Point of entry or exit
- Access granted or denied
- Card number
- Cardholder's name

Each card reader shall be capable of automatically switching the current access criteria at a door at different times of the day, based on access control data received from the site controller.

The following access criteria modes are required:

Free access - door is unlocked, no card entry is required

Secure access - door is locked (secure). A successful card attempt is required for valid entry. Door unlocks after access attempt.

Pending access - door is locked (secure). Door switches automatically to unlock (free) upon first successful access attempt during pending mode period, or vice versa (see next clause). Within pending mode, two options shall exist:

The card reader is operating in secure access mode. When the first valid entry occurs, the card reader shall automatically set the access criteria for this reader to free (public) access.

The card reader is operating in free (public) access mode. When the first valid "access attempt" occurs, the card reader shall automatically set the access criteria for this reader to secure (card-required) access.

1.1.2.1 **Database management:**

The system shall create and maintain a master database of all cardholder records
The System shall support various databases – Microsoft SQL, MySQL and Oracle.

Alarm Input Point Reporting Delay: The ACS shall allow the operator to apply an input point reporting delay period from 0-60 seconds for each input point terminal. The default setting for each input point reporting delay shall be 0 seconds.

Alarm Input Point Suppression: The ACS shall provide an alarm input point suppression facility such that the operator may define a time zone suppression period for each individual input point. Alarm conditions for suppressed input points shall not be recorded or archived by the system, however, trouble conditions will be recorded.

Alarm graphics (maps): The alarm-graphics portion of the system shall provide dynamic colour alarm graphic maps with the following functions: User definable graphic maps to depict input and output point conditions, reader status, and sub-map attachments in the ACS.

The ACS shall support the importing of most bitmap file format graphics produced with any graphic drawing program such as TIF, BMP or JPG file format. Vector file formats are not acceptable.

The ACS map program shall support the importing of most bitmap file format graphics to produce custom icons for all map attachments (input, output, reader, etc.).The ACS software shall be capable of storing a number of graphic maps.

The ACS shall provide a palette that includes six categories of pre-defined alarm map icons:

Input: representing a user-defined alarm input point located anywhere in the system. The input point icon shall flash, change colour, and the computer's internal sounder shall beep when an alarm condition exists. It shall be possible to click on the icon to respond to the alarm condition or move directly to the alarm queue window to respond to the alarm. Each alarm- input icon shall have a pop-up box that indicates the point's current state (open, short, alarm/active, secure).

Output: representing a user defined output point located anywhere in the ACS. It shall be possible to click on the icon to set or reset the output point. In addition, it can display the set or reset status of point.

Map layer: representing that lower level maps associated with the top layer map exist in the system. It shall be possible to navigate through the map layers by clicking on the map layer (up and down) icons.

Reader Terminals: reader icons shall have the capability of displaying: held open, forced open, locked, unlocked, unknown, override, up and down. Panels: representing a system panel controlled by the ACS. Panel icons shall have the capability of displaying the up or down status of the panel.

I/O Terminals: I/O terminal icons shall have the capability of displaying the up or down status.

Alarm handling: The alarm handling portion of the system, which consists of the point contacts, and the Alarm monitoring Window shall provide the following functions:

The Alarm Monitoring Window shall be capable of being sorted by any column. It shall also have displayed the total number of alarms in the queue and the number that are pending. The Alarm Monitoring Window shall have the capability to bring up the map to the input, which is highlighted in the window.

User definable alarm message/instructions description: The system shall provide the ability to assign alarm message/instructions to each state of an input point ('Open', 'Short', 'Alarm/Active', and 'Secure.')

Alarm message "pick list": all alarm message names and associated descriptions shall appear in the form of a pick list from which the operator may select an appropriate alarm name and message from all alarm messages defined in the database by the operator.

1.1.2.2 Event processing:

Panel card events: the ACS shall provide the capability for the user to define a panel card event, which may be executed by a cardholder at a reader equipped with a keypad. For each 'card event' the following data may be defined by the User:

- Alphanumeric event name
- Access code to control the triggering of the event (card activated event)
- ~~Event triggers type (card only, card + PIN, card + PIN + code, card + code, void card)~~
- Event Privilege level (0-7)
- Duration of the event execution (0-1440 minutes)
- Input point group to be suppressed or not
- Output point group to be activated or not
- Door strike operation enabled/disable
- Reset panel alarm relay

Host events:

Triggers: the ACS shall provide the operator with a scrolling list of the following event sequence triggers as a minimum that may be combined with the event sequence logical operators listed below to program a custom sequence of events. The ACS shall be delivered with this entire list functional whether or not these features are implemented by the User upon initial installation.

Actions: the ACS shall be provide a scrolling list of the following event sequence actions as a minimum, and allow the user to attach one or more actions to one or more of the event sequence triggers listed above to program a custom sequence of events.

- Enable anti-passback
- Disable anti-passback
- Unlock door control relay
- Lock door control relay
- ~~Enable timed override of door control relay~~
- ~~Set time zone for PIN code suppression~~
- ~~Set time zone for reader~~
- ~~Set time zone for reader override~~
- ~~Enable reader override~~
- ~~Disable reader override~~
- ~~Enable soft In-X-It~~
- ~~Disable soft In-X-It~~
- ~~Enable local timed override~~
- ~~Disable local timed override~~
- Lock all doors
- Unlock all doors
- Enable history upload
- Disable history upload
- Include time zone in access decision
- Ignore time zone in access decision

- Set controller relay
- Reset controller relay
- Enable input point group
- Disable input point group
- Set output point group
- Reset output point group
- Display a user defined message in a pop-up window
- Print user defined message on any printer
- System Database backup
- System Panel Download
- Display map
- Event Counters

Time zones: The ACS shall provide the capability for the user to define time zones with the following identification and configuration parameters.

1.1.2.3 Alphanumeric name

Alphanumeric description Allowance for up to eight periods, four active and four inactive, during each day of the week and each of three different holiday types. Any day of the year may be designated as a holiday; each defined as one of three holiday types.

1.1.2.4 Other Features:

User defined cardholder database fields: The system shall support up to an unlimited number of user defined data fields, which may be used to store information for each cardholder. Each field may be of a type: alphanumeric text, numeric, date, toggle (Yes/No). The ACS shall provide standard menu items, which shall allow the operator to define these cardholder database fields at anytime. The system shall remain on-line while user defined cardholder database fields are added or edited

~~The System shall support the capturing of high quality finger prints and encoding the finger print into the card during enrolment process that is native of System.~~

~~Also the System shall allow operators to capture and store the fingerprint to the System database. The fingerprints shall be captured using a biometric reader and an enrolment reader shall be used for fingerprint encoding.~~

Event and Transaction History: The ACS shall maintain a record of all alarm, card transaction, and system exceptions, which take place, and provide a means for a user to access this information. It shall be possible to print information in the log in real-time or by a report.

Anti-Passback Control: The ACS shall provide the capability to prevent more than one person from gaining access to a controlled area by recognizing when a cardholder who is granted access is passing back the card to another person to use the same card to gain access. If so programmed, an alarm may be generated if the anti-passback rules are violated by the cardholder. It shall be possible to define on a reader by reader basis, which readers are subject to anti-passback rules.

Cardholder Definition: The ACS shall provide the capability for the user to define Cardholders with the following identification and operating parameters.

- Cardholder name (first, middle, last)

- Cardholder address
- Cardholder phone number and extension number
- Validation period using start and void dates
- Department and Company fields from selection list of user defined departments and companies
- Unlimited number of user defined cardholder fields. The ACS shall provide the capability to use these fields in filtering reports.

Badge Definition: The ACS shall provide the capability for the user to define Cardholders with the following Badge identification and operating parameters on a per badge basis.

- Badge number assignment
- Issue level (0-7), only (1) per badge
- Validation period using start and void date and time
- Globally disable badges in all partitions
- Executive privilege enabled or disabled
- Active/Disable badge toggle button
- Trace enabled or disabled
- Override enabled or disabled
- PIN code (4 or 5 digits)
- Badge event privilege level
- Assign eight Access Groups and Time zones per Badge

System Status Display: The ACS shall provide a dynamic system status summary display that graphically indicates the following status information, filtered by panel or terminal. All status display information shall be summarized in a single window.

Alarm routing: The ACS shall provide the ability for the user to define which input points or groups of input points are displayed on each ACS Operator Workstation Terminal (OWT) computer. The system shall provide a report showing which input points are routed to each OWT.

Control points: The ACS shall provide the ability to define input points as control points to be used in input/output linking and event processing sequences of operation. Control points shall not enter the alarm queue and shall not require that an operator acknowledge them when they change state. The control point activity will however, be automatically logged to the history file.

Real Time Printer: The ACS shall be capable of printing to a network accessible printer as well as printing from an LPT port. The ACS shall be capable of printing with the following parameters:

Be able to specify printing of the following items, independent from each other:

- Input Point Alarms
- System Exception and Event Messages
- Access Trace

- Access Deny
- Access Grant
- Entry/Exit Central
- Audit Trail.

IP CCTV System

1.2.1 System Description

The system shall include all network video cameras, network switch, server hardware, video management software, cabling, supports, hardware, software and interfaces to provide complete system. The system shall seamlessly integrate with the access control system and security management control system. The system shall be expandable to encompass the entire site.

A network camera combines a camera and computer in one unit, which includes the digitization and compression of the video, as well as a network connector. The video is transported over an IP-based network, via network switches. This represents a true network video system, and is also a fully digital system, where no analogue components are used.

A network video system using network cameras adds the following advantages:

- High resolution cameras (megapixel)
- Consistent image quality
- Power over Ethernet
- Full flexibility and scalability

The CCTV system shall comprise minimum of the following equipments (components) along with CAT6 cables, cable containment and associated accessories, hardware to provide a complete and operational CCTV system for alarm assessment and general surveillance purposes. Provide following minimum operational features:

- Network camera,
- Network switch with patch panel and necessary converters (if required)

1.2.2 Viewing Station

1.2.3 Indoor High Definition Resolution IP Network Dome Camera

	Video:	
i.	Video standards	Dual H.264 and MJPEG stream
ii.	Sensor	1/2.7" 2MP progressive CMOS/CCD image sensor
iii	Resolutions and frame rates:	PAL
iv	Resolution	1920 x 1080
	Video out	
v	Signal	ONVIF S and G
vi	Connector	RJ-45 10BaseT / 100BaseTX
vii	Video S/N	> 50 dB
viii	Sensitivity:	
	Day/Night	Yes

	Color	0.01 lux
ix	Wide Dynamic Range	120DB
x	White balance	Yes
	Electronic shutter	
xi	PAL	1/5 – 1/10000 s
	Optical	
xii	Lens	Varifocal 2.8mm (W) – 12 mm (T)
xiii	Iris control	Automatic
	Camera Tampering	
xiv	Camera Sabotage	Alarm should be generated
	Software Control	
xv	Unit configuration	Via web browser or Configuration Manager
xvi	Motion detection	Yes
	Alarm	Yes; 1x Alarm In & 1x Alarm Out
	Network	
xvii	Protocols (Any of the following)	TCP/IP, UDP, HTTP, HTTPS, SMTP, SNMP, DNS, DHCP, NTP, FTP, RTSP (RTP), IGMP v3, UpnP, CIFS, NFS, IEC802.1x, ONVIF
xviii	Ethernet	10/100 Base-T, auto-sensing, half/full duplex, RJ45
xix	POE	IEEE 802.3af compliant
xx	Operating Temperature	0°C to 50°C
xxi	Operating Humidity	0% to 80% (Non Condensing)
	CERTIFICATES & APPROVAL	
xxii	Safety	UL
xxiii	Ingress protection and Vandal	IP66, IK10

1.2.3. Network Recorder

The Network video Recorder shall be capable to seamlessly integrate to the video analytic software, if and when added to the system.

SI No	Specification	Minimum requirement
1	Type	Rack-mountable, Dedicated Network Video Recorder with suitable hardware to connect up to 32 IP cameras (i), offered storage is not an externally attached device to NVR, the total recording storage requirement shall be met through internally installed HDD itself. The bidder to submit the storage analysis for required no of cameras for a period of 90 days @15fps on minimum D1resolution. All channels must support recording resolution of D1@15fps. (ii) Additional hardware/ software/ license, if any required by the bidder to meet its offered solution, should be considered accordingly by the bidder in its offer.
2	Storage capacity	Each NVR storage unit should be provided with usable 8 SATA HDD slots with provision of future expansion of HDD Slots using eSATA
3	Operating system	Linux or Embedded or Microsoft
4	Video compression	H.265/ H.264, MJPEG/MPEG
5	Recording support	The offered NVR must be able to support simultaneous recording of 32 IP cameras at D1 resolution at 15 fps
6	Network Protocol Support	HTTP/HTTPS, TCP/IP, RTSP, UDP, NTP, DHCP, IPC Search
7	On-board diagnostics	Web based support for system configuration & Diagnostics
8	Documentation	Installation guide, Operation & Maintenance Manuals, Installation CD/DVD for licensed software
9	Input Voltage	100~240 V AC, 50/60 Hz.
10	Compatibility	The supplied NVR must be compatible in all respects to the cameras being supplied at the locations
11	Operating temperature	10°C ~ 40°C or better
12	Operating Humidity	20% to 80% RH, non-condensing
13	HDD	HDD Hot swap, 8 bays SATA HDD, up to 8TB storage.
14	Product Safety	To comply with CE, FCC, UL
15	Details Required with offer	Bidder to submit the details of complete offered solution (Item make, model/part code, block diagram etc.) as stated above along with the offer.

1.2.5. 27U" FLOOR MOUNT RACK

The Network shall be accommodate to storage server, core switch, network switch, light interface modules, patch panel etc. Shall also be a provision to add more switch and server. Network Rack shall Compliance the following specification

SL No	Specification	Minimum requirement
1	Size	Min 27U
2	Type	Network
3	Mount	Floor
4	Caster Wheel	4 No's with Lockable

5	Mounting Size	19"
6	Cable Manager	As Required
7	Shelves	Min 4
8	Doors	Front and Rear Lockable Glass Door
9	Power Strip	Min 10 No's of 5/15A
10	Cooling Fan	4 No's on Top

1.3 Cables & Conduits

Cat 6 cables shall be used for connection to the switch from the camera/ access controller

The 2 Core 1.5 Sq mm cable connecting the Detectors/ Field devices to Fire alarm Panel shall be PVC insulated copper, multi strand, FRLS cables shall be 1100V grades.

Cables connected to devices shall be given 'S' loop on both the sides of the devices which shall be properly clamped to the ceiling. Loop shall also be left where cables connect sounders, panels, dampers, etc. Appropriate glands shall be provided where the cable enters the junction box.

All the cables and wires shall be tagged for proper identification. Wires shall be identified by ferrules at junction and cables by colour bands.

Cat 6 Cable

i.	Conductors	23 AWG solid bare copper or better
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LIST OF APPROVED MAKES – BSNL ELECTRICAL WING

S.No.	Item	Makes
1	Engine	Ashok Leyland /Cummins/ Cater pillar /KOEL/ Volvo Penta / Mahindra & Mahindra (up to 200 KVA) /Escorts (up to 30 KVA)/ Eicher (up to 35 KVA)
2	Alternator(Brushless)	Crompton Greaves (AL. series) / KEC / Leroy Somer / Stamford/Jyoti Ltd
3	Battery (Lead Acid / Mntc. Free)	Amara Raja / AMCO / Farukawa / Hitachi / Exide/ Prestolite / Standard
4	HV Switchgear (Vacuum Circuit Breaker/SF6)*	Biecco Lawrie / Crompton / Kirloskar / MEI / Jyoti Ltd
5	Transformer (Oil filled / Dry type)	ABB / Schneider Electric /Andrew Yule /
	a) Above 400 KVA	Bharat Bijlee / Crompton / EMCO /Kirloskar / Siemens
	b) Up to 400 KVA	In addition to above makes, Uttam/ Patson /Rajasthan Transformer and Switchgear
6	Air Circuit Breaker	L&T/ Schneider Electric / Siemens
7	MCCB(Ics=Icu)	L&T/ Schneider Electric / Siemens
8	SDF units	L&T/ Schneider Electric / Siemens/HPL/Havells
9	Power Contactors	L&T/ Schneider Electric / Siemens/ Lakshmi(LECS)
10	Change Over Switch	HPL / Havells / H-H Elcon
11	Intelligent APFC Relay	L&T/EPCOS(Siemens)/ Schneider Electric / Neptune Ducati/Syntron/ABB
12	Bus Bar Trunking/ Sandwiched Bus Duct	Moeller/L&T/Schneider Electric/ABB/ Legrand /Zeta
13	Power Capacitors (MPP/APP)	L&T/EPCOS(Siemens)/ABB/Crompton/ Schneider Electric / Neptune Ducati
14	Digital/ KWHr meter	Schneider Electric/ AE/ Digitron / IMP/Meco / Rishabh /Universal/HPL/L&T/ABB/Yokins
15	Cold shrink HT/LTCable Joint	Denson / 3M(M-Seal)/ Raychem
16	Rubber Matting	ISI mark
17	MCB/ Isolator /ELCB/RCCB/ Distribution Board	Crompton / Havells / Indokopp / MDS Legrand / L&T / Schneider Electric/ Siemens / Standard/ABB/HPL
18	MS/ PVC Conduit	ISI mark
19	Cable Tray	MEM/Bharti/Ratan/Slotco/Profab
20	HT/LT Cables	ISI mark
21	PVC insulated copper conductor wire	ISI mark
22	Centrifugal Pump	Amrut / BE / Beacon / Batliboi /Crompton / Jyoti / Kirloskar / KSB / Mather &platt / WASP/Grundfos
23	Submersible Pump	Crompton/Amrut / BE / Calama / Kirloskar / KSB
24	Motors	ABB/ Bharat Bijlee / Crompton Greaves / Schneider Electric / HBB / KEC / Siemens/Jyoti Ltd
25	Fresh Air Fans	GE / Khaitan/Almonard/Crompton

26	Starter	ABB / BCH / Schneider Electric / L&T / Siemens /
27	Single Phase Preventer	L&T / Minilec / Siemens / Zerotrip
28	GI/MS Pipe	ATC / ATL / BST / GSI / ITC / ITS / IIA / JST / Jindal /TTA / Tata/Zenith
29	Foot Valve	ISI mark
30	Gate Valve	Advance/Audco/Johnson Controls / Zoloto /Annapurna / Fountain /Kirloskar / Leader / Sant / Trishul
31	Compressors	Carrier/Emerson copeland/York/Danfoss (for chillers only)
32	Resin Bonded Glasswool	Fibre Glass / Pilkington / UP Twiga
33	Expanded Polystyrene	BASF(India) Ltd.
34	Gauge	Feibig / H.Guru / Pricol
35	Controls	FLICA / Honeywell / Indfoss / Penn- Danfoss / Ranco / Ranutrol / Sporland
36	Fine Filters	Anfiltra Effluent / ARW / Athlete/ Airtake / Dyna / Kirsloskar/ Puromatic/ Purafill/ Purolator / Tenacity
37	GI Sheet	HSU Jindal / National / Nippon Denro / Sail / Tata
38	Heat Detector	Appollo / Chemtron/ Edward / Fenwal/ Hochiki / Nitton /System Sensor/ Wormald/Honeywell Essar/Notifier
39	Ionization Detector	Appollo / Cerebrus / Edward/ /Fenwal / Hochiki / Nitton / System Sensor /Wormald
40	Photo Electric Smoke Detector	Appollo / Cerebrus / Edward / Fenwal/ Hochiki / Nitton / Wormald /System Sensor
41	Fire Panel(Microprocessor based)	Agni Instruments / Agni Devices/ Aruna Agencies / Carmel Sensor / Ravel Elect. / Honeywell Essar / Notifier / Navin Systems
42	Sprinkler/ Hose Reel &Hose Pipe	ISI mark
43	Fire Extinguisher	ISI mark
44	Lift	OTIS, Kone, Mitsubishi , Schindler, Johnson, Thyssenkrupp Elevator(India)

NOTE:

1. Any other make approved by PCE (E)/ CE (E) of this zone till date of opening of tender can also be used in this contract.
2. The accessories such as CT/PT/measuring instrument/relays provided by approved make in respect of Transformer/HT Panel/DG /AC Package Units as supplied by approved manufacturer along with the equipment are also acceptable in addition.
3. Any other makes which are approved by BSNL CO up to the last date of sale of tender can also be used in this contract.

RELEVANT IS STANDARDS

LIST OF INDIAN STANDARDS

- I.S.277 Galvanized steel sheets.
- I.S.325 Three Phase Induction Motors
- I.S.655 Metal Air Ducts
- I.S.732 Code of Practice for Electrical Wiring and fittings for Buildings.
- I.S.778 Gun Metal Gate, Globe and Check Valves for general purposes.
- I.S.900 Code of Practice for Installation and Maintenance of Induction Motors.
- I.S.996 Single Phase small AC and Universal Motors.
- I.S.1239 Mild Steel Tubes, G.I. Pipes, Tubular and other wrought steel fittings.
- I.S.1248 Direct Acting Electrical Indicating Instruments.
- I.S.1520 Horizontal Centrifugal Pumps for clear, cold and fresh water.
- I.S.1554 PVC Insulated (heavy duty) Electrical Cables
(Part-I) for working voltages upto and including 110 volts.
- I.S.2372 Timber for cooling towers.
- I.S.2516 AC Circuit Breakers.
- I.S.2592 Recommendation for Methods of Measurements of Fluid flow by
means of Orifice Plates and Nozzles.
- I.S.1822 Motor Starters of Voltage not exceeding 1000 volts.
- I.S.2208 HRC Cartridge Fuse – Links upto 650 volts.
- I.S.3589 Electrically welded steel pipes for water, gas and sewage.
- I.S.3624 Bourden Tube Pressure and Vacuum Gauges.

- I.S.4047 Heavy Duty air break switches and composite units of air break
switches and fuses for voltage not exceeding 1000 volts.
- I.S.6392 Steel Pipe Flanges.
- I.S.7403 Code of Practice for Selection of Standard Worm and Helical Gear
Boxes.
- I.S.8148 Specification for packaged air conditioning.
- CPWD General Specifications for Heating, Ventilation & Air conditioning (HVAC)-2004

IMPORTANT NOTE

All references to I.S.I. appearing in this specification may be read as Bureau of Indian Standards, Latest amended versions.

LIST OF SAFETY STANDARDS

- I.S.618 Code of Practice for safety and health requirements in Electrical and
Gas Welding and Cutting Operations.
- I.S.659 Safety code for Air Conditioning.
- I.S.660 Safety code for Mechanical Refrigeration.
- I.S.3016 Code of Practice for Fire precautions in welding and cutting operations.
- I.S.3210 Code for Safety procedures and practices in Electrical works.
- I.S.3696 Safety for Scaffolds and Ladders.

PROFORMA OF SCHEDULES

(Operative Schedules to be supplied separately to each intending tenderer)

SCHEDULE 'A'

Schedule of quantities : Attached

SCHEDULE 'B'

Schedule of materials to be issued to the bidder: Nil

SCHEDULE 'C'

Tools and plants to be hired to the bidder: Nil

SCHEDULE 'D'

Extra schedule for specific requirements/documents for the work, if any: Nil

SCHEDULE 'E'

Schedule of components of Materials, Labour etc. for escalation: Nil

SCHEDULE 'F'

Reference to General Conditions of contract :

Name of work:	As per NIT notification page
Estimated cost of work:	
Earnest money:	
Security Deposit and performance Guarantee	

General Rules & Directions: Officer inviting tender: Executive Engineer (Elect Plg&Tender),
Electrical Circle II, Chennai

Definitions:

2(v) Engineer-in-Charge	Executive Engineer (E), ED-I, Chennai
2(vi) Accepting Authority	SE (E), Electrical Circle-II, Chennai
2(x) Percentage on cost of materials and labour to cover all over heads and profits	10% (TEN)

CLAUSE 5

Time allowed for execution **30 DAys**

Authority to give fair and reasonable
extension of time for completion of work: SE (E), EC-II, Chennai

Competent Authority for deciding reduced rates: SE (E), EC-II, Chennai

Clause 25 Competent authority for conciliation: SE (E) not in-charge of the work.

BSNL EW-8
Bharat Sanchar Nigam Limited
Electrical Wing

Electrical Division: I, Chennai

Sub Division: ESD III

1. I/we have read and examined the notice inviting tender, schedule, specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, special conditions, Schedule of Rates and other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.
2. I/We hereby tender for the execution of the work specified for BSNL within the time specified, schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions and other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.
3. I/We agree to keep the tender open for ninety (90) days from the due date of submission thereof and not to make any modifications in its terms and conditions.
4. If I/We, fail to commence the work specified, I/We agree that the said BSNL shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely and the same may at the option of the competent authority on behalf of BSNL be recovered without prejudice to any other right or remedy available in law out of the deposit in so far as the same may extend in terms of the said bond and in the event of deficiency out of any other money due to me/us under this contract or otherwise.
5. Should this tender be accepted, I/We agree to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered upto maximum of percentage mentioned in clause 12.3 of the tender form and those in excess of that limit at rates to be determined in accordance with provisions contained in clause 12.2.
6. I/we agree to furnish to BSNL, Deposit at Call receipt/FDR/ Bank guarantee of a Nationalized/ Scheduled Bank for an amount equal to 5% of the of the contract value in a standard format within two weeks from the date of issue of award letter. I/We agree to keep the performance bank guarantee valid as per the BSNL terms and conditions.
7. 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 to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety or interest of BSNL.

<p>Signature of Witness (required in the case of bidder's thumb impression is given by the bidder in place of signature) Occupation of Witness :</p>	<p>(Signature of bidder) (Name & Postal address)</p> <p style="text-align: center;">Seal of Bidder</p> <p>Date:</p>
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Acceptance of Tender

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of BSNL for a sum of Rs. _____ (Rupees _____)

The letters referred to below shall form part of this contract Agreement

- a)
- b)

For & on behalf of BSNL

Dated

Signature :
Designation :