



TENDER ENQUIRY

SETTING UP OF BROADCAST STUDIO AT NISD

June 2022

Reference File No. 44660- NISD-66/2/2021-NISD
Subject: Setup of Audio Visual Media Center in NISD

NATIONAL INSTITUTE OF SOCIAL DEFENCE (NISD), Ministry of Social Justice & Empowerment
Plot No. G-2, Sector-10, Dwarka, New Delhi 110075

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Tender for setting up of Broadcast studio at NISD

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Notice Inviting Tender

Sealed tenders are invited from reputed manufacturers / their authorized Indian representatives for setting up of Broadcast studio on turnkey basis at NISD, including purchase of Audio/ Video equipment/ Acoustic work on Supply, Installation, Testing and Commissioning (SITC) basis.

Critical Dates:

S.No.	Activity	Date & Time
1	Publishing Date	10.06.2022
2	Document Download Start Date	10.06.2022
3	Seek Clarification Start Date	10.06.2022
4	Seek Clarification End Date	20.06.2022
5	Pre Bid Meeting Date at NISD	23.06.2022
6	Issue of corrigendum, if any	28.06.2022
6	Bid Submission Start Date	29.06.2022 (11:00 hrs.)
7	Bid Submission Closing Date	14.07.2022 (11:00 hrs.)
8	Technical Bid Opening date	15.07.2022 (11:00 hrs.)

The tenders received after the due date and time will not be accepted. NISD reserves the right to accept or reject any tender, fully or partially without assigning any reason whatsoever.

Email for seeking clarifications: nisdstudiotender@gmail.com

TENDER TERMS AND CONDITIONS

GENERAL

1. The tender is for setting up of a Broadcast studio at NISD on turnkey basis. It would include supply, installation, testing and commissioning of Studio equipment (audio and video) and the room acoustic works.
2. This Invitation is open only to the manufacturers (OEM) & their authorized representatives having experience in Broadcast Television System in Supply, Integration, Installation, Testing, and Commissioning of equipment mentioned in the list and providing after sales service/AMC for the equipment.
3. The list of the studio equipment along with the technical specifications and the quantity required is at Annexure –I
4. The details of the acoustic work for the studio is at Annexure II

ELIGIBILITY CONDITIONS

5. The bidder should be a company registered in India
6. The bidder should be either the manufacturer (OEM) and/or the authorized representative for supply and maintenance of all the studio equipment mentioned in Annexure-I
7. The bidder should have minimum ten years of experience in setting up of Broadcast studios. This would include – (i) Supply, Integration, Installation, Testing, Commissioning of equipment mentioned in Annexure-I and providing after sales service/AMC for the equipment and (ii) Preparing the studio and control room including the acoustic work. Proof to be provided.
8. The bidder should not sub-contract any part of the work other than Acoustic, Civil and Electrical works
9. The bidder should have setup/commissioned at least two broadcast studios in the last five financial years (2017-2022) anywhere in India, where the value of the purchase order should not be less than Rs. 1 Cr (Rs. One crore) each. Proof of the same including copies of purchase order, completion certificate and details of contact person to be provided.
10. The annual turnover of the bidder company should not be less than Rs. 2Cr (Rs. Two Crore) per year for any three financial years during the previous five financial years (2017-2022). Proof of the same to be provided.

11. Only "Class-I local supplier" and "Class-II local supplier" as defined under the Department for Promotion of Industry and Internal Trade (Public Procurement Division) Order dt 16th September 2020 on "Public Procurement (Preference to Make in India), Order 2017-Revision regarding" are eligible to bid. All the aspects of the Order should be complied. As mentioned in para 9 of the order, the Class-I local supplier/Class-II local supplier at the time of bidding is required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for Class-I local supplier/Class-II local supplier, as the case may be. They shall also give details of the location(s) at which the local value addition is made. The percentage should be indicated separately for the Equipment and for overall including equipment, Acoustic work, Installation, Training and any other charges (AMC not to be included).
12. Should be fully compliant with Department of Expenditure (Public Procurement Division) Order (Public procurement No. 1) dated 23rd July 2020 on "Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) 2017".
- a. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
 - b. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch of office controlled by such person, participating in a procurement process.
 - c. "Bidder from a country which shares a land border with India" for the purpose of this Order means:-
 - i. An entity incorporated, established or registered in such a country; or
 - ii. A subsidiary of an entity incorporated, established or registered in such a country; or
 - iii. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - iv. An entity whose beneficial owner is situated in such a country; or
 - v. An Indian (or other) agent of such an entity; or
 - vi. A natural person who is a citizen of such a country; or
 - vii. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.
 - d. The beneficial owner for the purpose of (iii) above will be as under:
 - i. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or

more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation-

- a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;
 - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
 - e. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 - f. In case of an unincorporated association or body individuals, the beneficial owner is the natural person(s), who whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
 - g. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 - h. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- I. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
 - II. [To be inserted in tenders for Works contracts, including Turnkey contracts] The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Model Certificate for Tenders

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority . I hereby certify that this

bidder fulfils all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”

Model Certificate for Tender for Works involving possibility of sub-contracting

“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered.[Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”

Earnest Money Deposit

13. The Bidder should submit an Earnest Money Deposit (EMD) of Rs. 5 Lakhs (Rs. Five lakhs only). No interest shall be paid on the EMD. Bids without EMD would be rejected.
14. Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department or Startups as recognized by Department of Industrial Policy & Promotion (DIPP) are exempted from submitting EMD. However the Bidder should submit clear proof that they are covered under this, else the bid would be rejected.
15. The EMD can be submitted in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Bankers Cheque, Bank Guarantee from any of the commercial Banks or online Bank transfer. The Beneficiary/ Payee should be DIRECTOR NISD. The EMD or bid security should be valid for a period of 45 days beyond the validity of the bid.
16. The Bank details for online transfer are:

Beneficiary Name	National Institute of Social Defence
Name of Bank	CANARA BANK
SB Account No.	90702010047973
IFSC	CNRB0019069
Name of Branch	BSF East Block R.K. Puram Sector-1 New Delhi 110066

Submission of Bids

18. The bid should be submitted in two parts. Part I – Technical bid and Part II – Commercial bid.
19. All the pages in the two parts of the bid should be separately numbered serially. A table of contents clearly indicating the page numbers should be there.
20. Part I- Technical bid should contain the following:
 - a. Bidder details as per the format prescribed at Annexure III
 - b. Make, model number, technical specifications, product features, detailed literature, brochures, etc. pertaining to the equipment quoted. Make, Model No. and Country of Origin of the equipment quoted should be provided in the format prescribed at Annexure – IV.
 - c. Certificate from the Original Equipment Manufacturer (OEM) for offering key equipment in the bid to NISD and for supporting the equipment for a period of not less than 5 years including two years warranty from the date of commissioning/acceptance of the equipment. OEM certificate to be given for the following key equipment – Cameras (items 1,2,3), Teleprompter (item 6), Video Switcher (item 8), Display panels (items 10,11,12), virtual studio (item 9), Video recorder and player (item 16), Digital Signal Processor (item 20), Professional SSD based Digital video recorder (item 17) Studio lights and Dimmer control (items 35,36,37) Enterprise NAS with 48 TB storage (item 39) (Item nos. indicated as per Annexure I).
 - d. Compliance statement in the format prescribed at Annexure-V
 - e. Check list as per the format prescribed at Annexure-VI
 - f. Earnest money deposit of Rs. 5 lakhs (Rs. Five lakhs only)
 - g. Declaration as per the format prescribed at Annexure-VII
21. Part II – commercial bid should contain the price details of the equipment and services quoted in the format prescribed at Annexure-VIII. The price quoted should be in Indian Rupees (INR) and include all duties, levies and charges. The price should be quoted in both figures and words. In the case any discrepancy, the figures in words would be taken.

Other Terms and Conditions

22. The offer should be valid for a minimum period of Six months from the date of Opening of the tender.
23. A security deposit at 3% of the value of purchase order shall be obtained from the successful bidder /supplier in the form of a Bank Guarantee for equivalent amount as a guarantee for satisfactory performance of contract. The security deposit shall be refundable on satisfactory

completion of contract and on the expiry of stipulated warranty period of equipment which would be a minimum period of 24 months from the date of commissioning and acceptance of the equipment. If the tenderer is not able to supply against the purchase order, the security deposit will be forfeited.

24. All essential items including cables, connectors, etc, needed for complete installation and for the smooth operation of the equipment shall be assumed to have been included in the quoted prices/items if these have not been quoted separately.
25. The tenderer should provide warranty/Guarantee for quoted product for a Period of two years from the date of commissioning and acceptance of the equipment. The tenderer should also give an undertaking that during warranty period, if any defect in the supplied equipment is noticed by the Purchaser, the supplier or his representative shall rectify the defect or replace the defective item free of cost at the Purchaser's site within a period of 30 days of his notification.
26. The tenderer should maintain all the equipment supplied for a period of three years after warranty. The charges for Comprehensive Annual Maintenance Contract (CAMC) for the same (including spares) should be quoted. However, it would be at the discretion of NISD to offer AMC.
27. Operation and maintenance manuals both Hard & Soft Copy and necessary extension boards should be supplied with the equipment
28. Charges on account of installation, commissioning and user training, if any, should be quoted separately.
29. In case any brand/ make, if any has been indicated, the same is for illustration/reference only. Any equivalent / better make/ brand with similar features/ functions would also be considered
30. NISD reserve the right to purchase varying quantity of material, less or more than the quantity specified in the tender
31. Original copy of the software associated with all the equipment should be supplied in DVD/Pen drive
32. Adequate training on the features and use of the equipment should be provided to the NISD staff at NISD
33. Only one Bid could be submitted by one Bidder.
34. NISD reserves to itself the right of accepting the whole or any part of the offer and the tenderer shall be bound to perform the same at his quoted rates.

35. The Studio should be installed, tested and commissioned within a period of **4 months** from the date of purchase order. Delivery and Commissioning of suppliers within time and date stipulated shall be essence of the contract. If the Supplier fails to do this within the period specified in the award of contract, the Purchaser shall, without prejudice to its other remedies under the contract, deduct liquidated damages from the Contract Price not by way of penalty. Recovery from the supplier as agreed liquidated damages will be calculated @ 1 percent of the price of the total project delayed for each month of delay or part thereof, until actual successful commissioning of the network system up to a maximum deduction of 10 percent of the cost of contract price.
36. The Contract shall be interpreted, construed and governed by the laws of India. In case of any disputes, the same will be under jurisdiction of courts in Delhi/New Delhi Only.
37. Any other guideline/ restrictions/ stipulations / orders from Govt. of India regarding supply of equipment would be applicable.
38. Generally in the specifications, the minimum acceptable value /number /features are indicated. Anything better can be offered.
39. If there is any discrepancy or ambiguity regarding the make/ model no. Mentioned in the technical bid **(Annexure-IV & V)** and the financial bid **(Annexure-VIII)**, the bid is likely to be rejected.
40. All information as per the prescribed annexures should be mandatorily provided.
41. Clarification, if any, should be sought through the email provided i.e, nisdstudiotender@gmail.com , before the last date for seeking clarifications.

Evaluation of Bids

42. The technical bids of eligible bidders and the bidders who have fulfilled other terms and conditions like submission of EMD, would be evaluated by NISD
43. Mere fulfilling the technical requirements will not be sufficient for technical shortlisting/ qualification.
44. **As a part of technical evaluation, the bidders may be asked to bring the equipment quoted, to NISD and demonstrate the features of the equipment. No charges would be paid for the same. Bidders who fail to do the same within the specified time frame would not be considered further for evaluation and technically disqualified.**
45. The financial bids of the technically shortlisted/ qualified bidders would only be opened on the date and time that would be intimated to the technically shortlisted/ qualified bidders.
46. The financial bids of the bidders who do not qualify technically will not be opened.
47. The total cost of setting up and maintenance of the studio including cost of the equipment, installation, training, acoustic work, AMC for three years and any other charges would be used

for financial evaluation. However, while placing the order NISD reserves the right to vary the quantity of the equipment and also not order certain equipment.

48. NISD reserves the right to reject any bid without assigning any reason.

Payment Terms

49. 25% of the equipment cost would be paid after supply of the equipment

50. Remaining payment would be released after successful commissioning and acceptance of the equipment.

51. 3% would be retained if the security deposit is not submitted

Fraud and Corrupt Practices

52. The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this Tender, NISD shall reject a Proposal without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the "Prohibited Practices") in the Selection Process. In such an event, NISD shall, without prejudice to its any other rights or remedies, forfeit and appropriate the EMD or PBG, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to NISD for, inter alia, time, cost and effort of NISD, in regard to the RFP/ Tender, including consideration and evaluation of such Bidder's Proposal.

53. Without prejudice to the rights of NISD under Clause above and the rights and remedies which NISD may have under the LOI or the Agreement, if a Bidder is found by NISD to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the issue of the LOI or the execution of the Agreement, such Bidder shall not be eligible to participate in any tender or RFP issued by NISD during a period of 3 years from the date such Bidder is found by NISD to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be. For the purposes of this Section, the following terms shall have the meaning hereinafter respectively assigned to them:

- a. **"Corrupt Practice"** means the offering, giving, receiving, or soliciting, directly or Indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing

or engaging in any manner whatsoever, directly or indirectly, any official of NISD who is or has been associated in any manner, directly or indirectly with the Selection Process or the LOI or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of NISD, shall be deemed to constitute influencing the actions of a person connected with the Selection Process);

- i. or Save as provided herein, engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LOA or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the Award or the Agreement, who at any time has been or is a legal, financial or technical consultant/adviser of NISD in relation to any matter concerning the Project;
- b. **“Fraudulent Practice”** means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process.
- c. **“Coercive Practice”** means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person’s participation or action in the Selection Process;
- d. **“Undesirable Practice”** means Establishing contact with any person connected with or employed or engaged by NISD with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or Having a Conflict of Interest; and
- e. **“Restrictive Practice”** means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.

Conflict of Interest

54. A Bidder shall not have a conflict of interest that may affect the Selection Process or the Solution delivery (the “Conflict of Interest”). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, NISD shall forfeit and appropriate the EMD, if available, as mutually agreed genuine pre-estimated compensation and damages payable to NISD for, inter alia, the time, cost and effort of NISD including consideration of such Bidder’s Proposal, without prejudice to any other right or remedy that may be available to NISD hereunder or otherwise.

55. NISD requires that the bidder provides solutions which at all times hold NISD's interests paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The bidder shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of NISD.
56. Without limiting the generality of the above, Bidder shall be deemed to have a Conflict of Interest affecting the Selection Process, if:
- I. the Bidder, its consortium member (the "Member") or Associates (or any constituent thereof) and any other Bidder, its consortium member or Associate (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 or ownership interest of an Bidder, its Member or Associate (or any shareholder thereof having a shareholding of more than 5 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 consortium member or Associate is less than 5% (five per cent) of the subscribed and paid up equity share capital thereof. For the purposes of this Clause, indirect shareholding held through one or more intermediate persons shall be computed as follows:
 - where any intermediary 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; 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 if the shareholding of such person in the intermediary is less than 26% (twenty six per cent) 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 or its Associate receives or has received any direct or indirect subsidy or grant from any other Bidder or its Associate; or
 - IV. Such Bidder has the same legal representative for purposes of this Application as any other Bidder; or

- V. Such Bidder has a relationship with another Bidder, directly or through common third parties, that puts them in a position to have access to each other's' information about, or to influence the Application of either or each of the other Bidder; or
 - VI. There is a conflict among this and other Systems Implementation/Turnkey solution assignments of the Bidder (including its personnel and other members, if any) and any subsidiaries or entities controlled by such Bidder or having common controlling shareholders. The duties of the bidder will depend on the circumstances of each case. While providing software implementation and related solutions to NISD for this particular assignment, the bidder shall not take up any assignment that by its nature will result in conflict with the present assignment; or
 - VII. A firm hired to provide System Integration/Turnkey solutions for the implementation of a project, and its Members or Associates, will be disqualified from subsequently providing goods or works or services related to the same project;
57. The Bidder should have Office /Service Centre in Delhi /NCR . Address and contact details to be provided with documentary proof.
58. The Bidder should provide complete workflow / Schematic Diagram of the Broadcast Studio Equipment.

*****End of Document*****

SPECIFICATION AND QUANTITY OF BROADCAST STUDIO EQUIPMENT FOR NISD

SPECIFICATION			
S.No.	FEATURES	SPECIFICATIONS	QTY
1. SITC OF BROADCAST QUALITY 4K CAMCORDER FOR OUTDOOR AND INDOOR SHOOT			1
	Camera		
1	Image sensor	1/3" or 1/2" Three MOS/CMOS Sensor or 1" MOS/ CMOS Single chip Image Sensor	
2	Effective Pixels per Sensor	15 Megapixel or more	
3	Lens	The camcorder should have integrated Zoom Lens with Optical Zoom ratio of 15X or better with manual three rings for control of zoom, iris and focus and Min 10x Digital Zoom	
4	Optical Image stabilizer	Required	
5	Sensitivity	F12 or better on (2000 lx, 3200 K, 89.9 reflect	
6	Horizontal Resolution	2,000 TV lines or more (3840 x2160p mode) or better 1,000 TV lines or more (1920 x1080p mode) or better	
7	Monitor/Viewfinder	3.5" type TFTLCD/Led color monitor and 0.25 type OLED/LCD Viewfinder(or better)	
8	Essential Features	It should have slow and fast motion recording and reproduction facility.	
9	Essential Features	The camcorder should also have 3.5" or larger LCD /Led colour monitor	
10	Video / Audio Output	The camcorder should have 3G/HD-SDI output, HDMI out and microphone/line input on XLR. Besides, it should also have USB port.	
11	Memory card Slots	The camcorder should be able to record on memory cards. It should have at least two memory card slots which should enable relay recording/ simultaneous or backup recording for enhanced reliability.	
12	Gain Selections	Variable from 0 dB to + 18 dB or better in steps	

13	White Balance	Auto I Preset /Variable	
14	Signal to Noise Ratio	60 dB or better	
15	Optical Zoom	15 X or better	
16	Slow and Quick Motion Function	Yes Desired	
17	Recording format	<p>UHD (3840 x 2160) : HEVC Long GOP 150 Mbps (4:2:0) with MOV wrapper and MPEG-4 AVC/ H.264 Long GOP 150 Mbps (4:2:2) with MOV wrapper or XAVC - L QFHD MPEG-4 AVC / H.264 150 Mbps with MXF wrapper or MPEG-4 AVC / H.264 150 Mbps with QuickTime wrapper</p> <p>HD (1920 x 1080): MPEG-4 AVC / H.264 Long GOP 50 Mbps (4:2:2) with MOV wrapper or XAVC - L HD MPEG-4 AVC/ H.264 50 Mbps and MPEGHD422 50 Mbps with MXF wrapper or MPEG-4 AVC / H.264 50 Mbps and MPEG-2 Long GOP with QuickTime wrapper</p>	
	Video/Audio Recording		
18	Recording Media	SXS/SDHC/SDXC/ Micro P2 Memory card	
19	Recording resolution	3840 ×2160 (UHD), 1920 ×1080 (FHD), 1280 ×720 (HD) 720 ×480 (SD), 720 ×576 (SD)	
20	Recording Formats	XAVC/MOV(AVC)/MOV(HAVC)/AVCHD	
21	Live Streaming	Network Protocol: RTSP/RTP/RTMP Video Compression Format: H.264/MPEG4 AVC Main Profile, High Profile Audio Compression Format: AAC LC	
	Interfaces		
22	Video Output:	BNCx1HD-SDI, SD-SDI	
23	HDMI Out:	HDMI:4:2:2/10 bit UHD / HD /SD format support	
24	Audio Input:	XLR-type 3-pin (female) (x1)	
25	Audio Output:	3.5 mm diameter stereo mini jack x 1,	

	Accessories	Battery, Battery charger, AC adaptor, AC cable, Microphone holder kit, Shoulder strap, Eye cup.	
26	Additional battery (with each Camcorder)	Qty 1x Additional Batteries	
27	Memory Card (with each Camcorder)	Qty 2x 64GB Memory cards Compatible with camera for 4k recordings	
28	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
2. SITC OF BROADCAST QUALITY PTZ CAMERA			4
1	Type	4K PTZ Camera	
2	Image Sensor & No Of Effective Pixels	1/2.5" 4K MOS/CMOS/EXMOR or better sensor, No of effective pixels approximately 8.5M	
3	Optical Zoom and Digital Zoom	20x or better optical zoom 25X or better Digital Zoom	
4	Min. Illumination	1-3 Lux or Lower	
5	Focus	Auto / Manual	
6	Horizontal Resolution	4K : 1500 TV lines HD: 1000 TV lines or Better	
7	White Balance	Auto White Balance	
8	Pan Range	Pan: $\pm 170^\circ$ or better	
9	Tilting Range	Tilt: $+90^\circ$ to -20° or better	
10	Preset	upto 100 Positions	
11	Pan Tilt Speed	0.1°/s to 160°/s or better	
12	Control	Serial / IP	
13	Video Output	HDMI x 1, 3G/HD - SDI x 1, (4K at HDMI, IP (Streaming) & HD at 3G SDI OUT (BNC)	
14	IP Output	Should have NDI HX Video over IP output	
15	Audio Input	3.5mm Line in	
16	Channel	2	
17	Video format	HDMI 2160/29.97p/25p 1080p 59.94/50/29.97/25 1080i 59.94/50 720p 59.94/50 SDI 1080p 59.94/50/29.97/25 1080i 59.94/50 720p 59.94/50	
18	IP (streaming)	RTMP, SRT, NDI HX	

19	Horizontal viewing angle	Approx. 70° or better	
3. SITC OF REMOTE CONTORL PANEL FOR PTZ CAMERA			1
1	PTZ Camera Control	PTZ camera remote controller compatible with above camera	
2	Control functions	Pan, Tilt, and Zoom, Iris, Focus,	
3	Joystick	2-Axis Joystick	
4	Control functions	Should be able to control 100 cameras on IP	
5	Display	LCD screen displays menus & key camera	
6	Feature	Easy management of up to 100 PTZ camera presets	
4. SITC OF TRIPODS WITH DOLLY FOR CAMERA LOAD			3
1	Section	Two-Stage Aluminum Tripod System	
2	Payload	5 kg or better	
3	Ball diameter	75mm or better	
4	Section	2 STAGE	
5	Dolly	Compatible Dolly	
6	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
5. SITC OF TRIPOD WITH DOLLY FOR CAMERA AND TP LOAD			1
1	Section	Two-Stage Aluminum Tripod System	
2	Payload	16 kg or better	
3	Ball diameter	100 mm or better	
4	Section	2 STAGE	
5	Dolly	Compatible Dolly	
6	Pan Bars	Dual Pan Bars	
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
6. SITC OF TELEPROMPTER SYSTEM			1
1	Type	Teleprompter System for Mounting PTZ Camera. Should be mountable on tripod and/or support stand. Suitable Stand to bear the payload of TP mount and PTZ Camera Should be quoted.	

2	Mounting Hardware & Monitor	15" or better Professional Display along with Teleprompter mounting Hardware, Brightness : 350 Nits or better Screen Resolution :1024x768 or better Reverse/Rotation : 4 way picture orientation Video: Autosensing PAL/ NTSC/VGA Composite	
3	Controller	Should be supplied with 8 Button desktop hand control device that should support adjustment of the speed and direction of scrolling text on the prompter. Should support quick command buttons for navigation around the script and trigger configurable commands	
4	Feature Support	Teleprompter software with following features support Adjustable Font Size Date & Time Display Story editing on the fly Hold & Block Stories Import RTF, DOC, HTML User- friendly Interface Should be supplied with suitable I/O interface to connect with Camera Mount Teleprompter Display	
5	Feature Support	TP Should be able to Show the Presentation (PPT)	
6	Teleprompter Terminal	Teleprompter should be supplied with latest configuration PC/Laptop & peripherals with latest licensed windows OS and should have robust teleprompting software designed for professional shoots with ability to easily import MS word, .txt, and .rtf files.	
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
7. LAPTOP COMPUTER/LAPTOP SYSTEMS FOR TELEPROMPTER			1
1	Type	Laptop	
2	Processor	min. latest generation i5 Processor	
3	Ram	8GB or better	
4	Hard disk (SSD)	1 TB or better	
5	Screen size	15" in case of laptop	
6	Interfaces	HDMI interface for extended display	

7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
8. SITC OF DIGITAL VIDEO PRODUCTION SWITCHER FOR TV STUDIO			1
1	Inputs	Total 12 or more inputs in combination of IP, 3G/HD/SD-SDI or 3G/HD/SD-SDI, HDMI It should be compatible with workflow	
2	Outputs	Total 4 or more output in combination of IP, 3G/HD/SD-SDI or 3G/HD/SD-SDI, HDMI It should be compatible with workflow	
3	Video Format	1080p: 59.94, 50, 29.97, 25 1080i: 59.94, 50 720p: 59.94, 50, 29.97, 25 576i 50	
4	Features	Switcher should have Seamless switching facility, Multilayer Effects, 2D DVEs, Chroma Key as standard feature. Virtual Studio system either inbuilt or External Virtual System to be quoted by bidder* Detailed Specification of Virtual is mentioned below	
5	CG Software	CG Software: External / Inbuilt CG software to create still graphics and overlay on program Out	
6	Hardware Control Panel	Switcher Should have at least 8 Direct Source Button Control panel	
7	Software Control Panel	Should support Software Control Panel	
8	Mix Effect Buses	1 ME with 4 full function keys plus transition keyer or better	
9	Chroma Key	Minimum 1 chroma keyer	
10	DVE	2 (2D) floating DVES to be utilized in any keyer in the system	
11	Wipe Generator	Built-in Wipe Generator for M/E	
12	Pattern Generator	Minimum 2 Pattern Generators	
13	Frame Syncs & Format Converters	6 or more freely-assignable Frame Syncs & Format Converters	
14	Multi-viewer	1 Built in Multi-Viewer with tally, source names, and clock. Configurable Minimum 10 windows.	

15		Bidder can quote System with above specs and to comply it bidder may add converters, Distribution amplifier, Peripherals Etc. to qualify the specs and to complete the workflow Converters should be standard brand, any substandard brand will not be acceptable	
9. SITC OF TRACKLESS VIRTUAL STUDIO SYSTEM			1
1	Type and features	Integrated Virtual Studio, Switcher, Graphics Overlay, Recording and Streaming system	
2	Live Streaming	Should be possible	
3	Virtual Studio	Min. 25 standard Virtual sets along with the system	
4	Recording	H.264 / MPEG-2	
5	DSK and CG	2x DSK to add CG and animations to the scene	
6		Additional Features in case External Virtual System is quoted	
7	Inputs	2 live inputs and should support Trackless Virtual Studio	
8	Video Input	Two 3G/HD-SDI and one AUX	
9	Video Output	Two 3G/HD-SDI and one AUX	
10	Format Support	1080p 50,25 1080i 60/59.94/50, 720p 60/59.94./50	
11	Audio Input	SDI audio embedded x 2 HDMI audio embedded x 1 Mini Phone Jack x 2	
12	Keyer	Chromakey / Luminance key x 2	
13	Should Include	500GB or better Media Cartridge	
14	Hardware	Suitable Hardware with complete accessories to run 3D Trackless virtual system	
15	Display	Should be quoted with one 21" FHD or bigger Monitor	
16	Control Panel	Virtual System should be supplied with Hardware control Panel with at least 10 functional keys, T- Bar, Program/Preset Rows with buttons	
10.SITC OF LED SMART DISPLAY PANEL FOR PCR MULTIVIEW			1
1	Screen Size (Diagonal)	49" - 52"	

2	Resolution (H × V)	3840 X 2160	
3	Aspect ratio	16:9	
4	Viewing Angle (Horizontal/Vertical)	178° / 178°	
5	Inputs	HDMI 2.0 X 3, USB 2.0 X 1, RJ45 X 1,	
6	OS	Smart OS either Android or Native OEM OS	
11. SITC OF SMART LED DISPLAY PANEL FOR STUDIO FOLDBACK			2
1	Screen Size (Diagonal)	55"	
2	Resolution (H × V)	3840 X 2160	
3	Aspect ratio	16:9	
4	Viewing Angle (Horizontal/Vertical)	178° / 178°	
5	Inputs	HDMI 2.0 X 3, USB 2.0 X 1, RJ45 X 1,	
6	OS	Smart OS either Android or Native OEM OS	
7	Mount	Pedestal for Foldback	
8	Sound Output	10 Watt or More	
12. SITC OF 4K (UHD) INTERACTIVE DISPLAY PANEL			1
	DISPLAY		
1	Screen Size (Diagonal)	75 inch	
2	Aspect Ratio	16:9	
3	Resolution	3,840 x 2,160 (UHD)	
4	Brightness	300 cd/m ² or better	
5	Contrast Ratio	1200:1 or better	
6	Response Time	10 ms or better	
7	Viewing Angle (Horizontal / Vertical)	176 degrees / 176 degrees	
8	Panel Life	30000 hours or better	
	TOUCH PANEL		
9	Detection Method	Infrared	
10	Touch operation	Min 12 Touch points or better	
11	OS Support	Windows 10 or above	
12	Input	HDMI Type A x 2, Component/RGB x 1, USB : at least 3 USB ports	
13	Output	HDMI	

14	Slots	Should have slot to directly integrate PC in the Interactive Display Should be quoted with PC mountable on Interactive Display with Min i5 Processor, 8GB RAM, 250GB SSD or better	
15	Built in Speaker	15 Watt or better	
16	OPS	Should Have OPS slot and OPS computer with Min i5 Processor, 8GB RAM, 240GB SSD and Windows OS should be quoted	
13. SITC OF FIELD MONITOR AND RECORDER (SSD)			1
1	Screen Size	7" or better touch screen Camera Mount Monitor & Recorder	
2	Resolution	1920 x 1080 or better	
3	Brightness (cdm2 / nits)	1000 nits or better	
4	Video Input	1xHDMI, 1x4K SDI 12G/6G or HD - SDI 3G/1.5 G, uncompressed 10 bit or 8 bit 422	
5	Video Output	1xHDMI, 1x4K SDI 12G/6G or HD - SDI 3G/1.5G , uncompressed 10 bit or 8 bit 422	
6	Feature	Should be used as Viewfinder for Camcorder and should also have Recording Facility	
7	Audio In/Out	HDMI, SDI and Analogue Audio in and out via XLR	
9	Recording Formats	ProRes, DNxHD, H.264	
10	Power	DC Power as well as Battery operated (Min 2 Hrs Backup)	
11	Accessories	2x SSD 480GB (For 4K Recording) or better should be supplied	
12	Accessories	1x SSD reader should be supplied	
12	Accessories	Suitable camera mount attachment , compatible XLR Cable with carry case should be supplied	
14. SITC OF AUDIO DELAY UNIT			1
1	Type	Audio Delay unit with up to 3000ms	
2	Audio Input	3 x balanced stereo audio / Microphone (3 Pin XLR / 1/4" (6.3mm) Socket) 2 x unbalanced stereo audio, RCA sockets	

3	Audio Output	2 x balanced stereo audio, XLR connectors 2 x unbalanced stereo audio, RCA sockets 1 x 3.5mm Stereo headphone	
4	Phantom Power	Switchable for Microphone input	
5	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
15. SITC OF VIDEO STREAMING ENCODER			1
1	Application	Video streaming server with Dual Streaming out	
2	Video Input	SD/HD SDI,HDMI	
3	Audio Input Analog	SDI & HDMI embedded audio, RCA L/R x1	
4	Video Bitrate	Record Only: Up to 16Mbps (1080p50/60) Stream Only: Up to 10Mbps (1080p50/60) Rec + Stream: 36Mbps (1080p50/60)	
5	Streaming Platforms	Should support simultaneous streaming to any two platforms like YouTube, Facebook or websites	
6	Recording	Simultaneous recording in H.264 MP4 format while streaming in RTMPS, RTMP, RTSP, TS, or SRT.	
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
16. SITC OF VIDEO RECORDER AND PLAYER			1
1	Application	File Based Multichannel Video Recorder / Player with Monitor Display in built	
2	Slots	Should have Two slots for SSD	
3	Inputs	1x 3G/12G-SDI 3x 3G-SDI 1x HDMI Analog Audio (Balanced),	
4	Output	1x 3G/12G-SDI 1x HDMI Analog Audio (Balanced),	

5	Reference	Reference Input required	
6	Storage	2x 500GB SSD storage module with either built in USB 3.0 connection or to be Supplied with 1x External Dock to read SSD.	
7	File Format support	Quick Time .MOV H.264, Apple Pro res	
17. PROFESSIONAL SSD BASED DIGITAL VIDEO RECORDER & PLAYER WITH INBUILT DISPLAY			1
1	Display Size	19" or better	
2	Resolution	1920 x 1080 or Better	
3	Bit depth	10-bit or better	
4	Brightness	1200nit or better	
5	Video Input	Selectable Dual 12G/6G/3G/1.5G SDI HDMI (2.0)	
6	Video Output	SDI 1x 4K-SDI 12G/6G/3G/1.5G, HDMI (2.0)	
7	Audio In/Out	8 Channel in HDMI 24 bit and SDI embedded or better Line in / Mic in Headphone out	
8	Format Support	720p 50/60, 1080i 50/60 1080pSF 24/25/30 1080p 24/25/30/50/60/100/120 2160p 24/25/30/50/60	
9	Power	DC input direct or through adaptor	
10	Recording Media	Min 2 x 500GB SSD with Suitable enclosure should be supplied	
11	Genlock	Required	
12	Docking Device	External docking device with USB 3.0 connector for connection of above SSD with Host computer Min 1x Per Recorder	
13	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
18. SITC OF 16 CHANNEL ANALOG AUDIO MIXER CONSOLE			1
1	Mixing Channels	16 Channel or better Audio Mixer with Min. 12 Mic Pre amps on Balanced XLR	
2	AUX	4 x Pre/Post or better	
3	Subgroups	4 mono/2 stereo or better	
4	Mic inputs	MIC: 12	
5	Phantom Power	Phantom Power on all mic channels	
6	Fader	Sliding	

7	USB Interface	2-in/2-out	
5	Bands	4-band	
6	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
19. SITC OF AMPLIFIED/POWERED SPEAKERS (PAIR)			2
1	Type	2 Way Active Studio Monitor	
2	Frequency Range	50 Hz-18 kHz or better	
3	Max Peak SPL	100 dB or better	
5	LF Driver Size	Min. 5" to Max. 6.6"	
6	HF Driver Size	1" or better	
7	Low-Frequency Amplifier Power	40 watts or Better	
8	High-Frequency Amplifier Power	40 watts or Better	
9	Total Power Output	80 Watt or Better	
10	Input Types	1 x XLR, 1 x TRS Balanced	
11	AC Input Voltage	100-240 VAC +/- 10% 50/60 Hz	
12	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
20. SITC OF DIGITAL SIGNAL PROCESSOR			1
1	Feature	Networked Digital Signal Processor	
2	Input	12 Analog Inputs (with 48v Phantom Power per Channel)	
3	Output	8 Analog Outputs	
4	GPIO	12 Control Inputs and 6 Logic Outputs for GPIO Integration or better	
5	Indicators	Front Panel LED Indication	
6	Analog Inputs	12 electronically balanced	
7	Mic/Line Inputs	Nominal gain 0dB, electronically switchable up to +48dB, in +6dB steps	
8	CMRR	75dB at 1KHz or better	
9	Phantom Power	48V nominal, selectable per input	
10	Analog Outputs	8 electronically balanced	
11	Frequency Response	20Hz-20KHz or Better	
12	Dynamic Range	108dB typical or better	
13	Control Ports	12 inputs and 6 outputs	
14	Control Network	RJ45 Ethernet connector	
15	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	

21. SITC OF AUDIO AMPLIFIER			1
1	Type	4 channel amplifier with Network control, DSP, Monitoring Class D or better	
2	Output Power	100W per channel output or better	
3	Frequency response	20Hz - 20kHz +/-0.5dB	
4	Input Impedance	20 kΩ balanced, 10 kΩ unbalanced	
5	Crosstalk	80dB or better	
6	Voltage Gain	4/8Ω, 70V rms and 100V rms Operation : 34dB	
7	Common Mode Rejection	70dB or better	
8	S/N ratio	104dB or better	
9	DSP	On-board Digital Signal Processor	
10	Other Features	Input Router <ul style="list-style-type: none"> • Input Delay – Up to 1000ms • Input Parametric EQ – 8 band • Crossover • Output Parametric EQ – 8 band • Output Delay – Up to 100ms 	
11	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
22. SITC OF TWO WAY LOUD SPEAKERS			4
1	Type	Two-way Min. 5" to Max 6.5" Wall Mount Speaker	
2	Frequency range	85 Hz – 18 kHz or Better	
3	Nominal coverage	120°H x 120°V	
4	Components	5.25 inch LF and 0.75 inch HF (+- 5%,)	
5	Power Capacity	60 Watts	
6	Nominal impedance	8 ohms	
7	Transformer Taps	10 W, 5 W (& 2.5W @ 70V)	
8	SPL	100 dB at 8 Ohm or Better	
9	Accessories	Wall-mounting system	
10	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
23. SITC OF WIRELESS LAPEL MICROPHONE			3
	Receiver		
1	Switching bandwidth	30 MHz or better	

2	Sensitivity	6.3 dB μ V / -100 dBm or better	
3	Diversity System	True Diversity / Microprocessor-controlled diversity	
4	Modulation	Wideband FM	
5	Audio bandwidth	40 – 18 000 Hz or better	
6	T.H.D.	0.3 % or better	
7	SNR	100 dB or better	
8	Audio outputs	1 x XLR sockets balanced, 1 x TS ¼" / 6.3 mm jack sockets unbalanced	
	Transmitter (Battery Operated , AA Type)		
9	Switching bandwidth	≤ 30 MHz	
10	RF output power	10 to 50 mW	
11	Modulation	Wideband FM	
12	Audio input	TB3M / 3-pin mini-XLR socket or Compatible with Transmitter	
13	Audio bandwidth	40 – 18 000 Hz or better	
14	T.H.D.	0.7 % or better	
15	SNR	100 dB or better	
16	Lapel Mic	Cardioid Polar pattern with frequency Response 180 Hz - 15KHz	
24. SITC OF LAPEL MICROPHONE			2
1	Transducer Principle	Pre-polarized condenser	
2	Frequency Range	40–18,000 Hz or better	
3	Polar Pattern	Uni-directional	
4	Sensitivity	Sensitivity at 1,000 Hz: 7 mV/Pa	
5	Sound Pressure Level for 1% THD	110 dB or better	
6	S/N Ratio	60 dB or better	
7	Phantom Power	9-52 Volt Phantom Power	
8	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
25. SITC OF WIRELESS HANDHELD MICROPHONE			2
	Receiver		
1	Switching bandwidth	≤30 MHz	
2	Sensitivity	6.3 dB μ V / -100 dBm or better	
3	Diversity System	True Diversity / Microprocessor-controlled diversity	
4	Modulation	Wideband FM	
5	Audio bandwidth	40 – 18 000 Hz or better	
6	T.H.D.	0.3 % or better	
7	SNR	100 dB or better	

8	Audio outputs	1 x XLR sockets balanced, 1 x TS ¼" / 6.3 mm jack sockets unbalanced	
	Transmitter (Battery Operated, AA Type)		
9	Microphone capsules	Dynamic (super cardioid)	
10	Switching bandwidth	≤30 MHz	
11	RF output power	10 to 50 mW	
12	Audio bandwidth	40 – 18 000 Hz or better	
13	Modulation	Wideband FM	
14	Max. SPL	120 dB or better	
15	T.H.D.	0.7 % or better	
16	SNR	120 dB or better	
17	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
26. SITC OF EAR PIECE FOR ANCHOR			2
1	Type	Anchor Ear Piece with acoustic Tube with 125Ω, 5' (1.5M) cord, and ¼" plug.	
2	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
27. SITC OF WIRELESS LAPEL MICROPHONE FOR OUTDOOR WITH CAMERA MOUNTABLE RECIEVER			1
1	System Package	Camera Mount Receiver, XLR output Cable, Body pack Transmitter with Lavalier Microphone (uni-directional)	
2	Antenna	High-Gain Antenna	
	Receiver		
3	Frequency Response	50Hz – 15kHz or Better	
6	Modulation	FM / Wideband FM	
7	Oscillator	PLL Synthesized	
8	Power	Powered by 2 "AA" Batteries	
	Transmitter		
9	Frequency Response	50Hz – 15kHz	
10	RF Power	25mW or better	
11	Oscillator	PLL Synthesized or Receiver Principle - Adaptive diversity	
12	Power	Powered by 2 "AA" Batteries	
13	Microphone	Lapel microphone (Unidirectional)	

14	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
28. SITC OF SHOTGUN MICROPHONE			1
1	System	Directional shotgun microphone	
2	Directional Pattern	Cardioid / Super cardioid	
3	Maximum SPL	120 dB or more	
4	Sensitivity	-36dB or better	
5	Phantom Power	Should work on Phantom power / batteries	
6	Frequency Range	80Hz to 18kHz or Better	
7	Output Connection	3-pin XLR, balanced	
29. SITC OF PROFESSIONAL HEADPHONE			3
1	Headphone type	Closed-back	
2	Wearing Style	On-ear	
3	Audio frequency bandwidth	20 - 20000 Hz or Better	
4	Sensitivity headphones	100 dB SPL or Better	
5	Rated Impedance	55 Ohms or Better	
6	Max Power	500mW or better	
6	Audio Interface	Type Stereo plug: 3.5mm (1/8") with 6.3 mm (1/4") screw-on adapter	
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
30. SITC OF AUDIO EMBEDDER			2
1	Type	SDI and 2-CH Audio Embedder	
2	Input	1x 3G-SDI BNC or better	
3	Output	1x 3G-SDI BNC or better	
4	Audio Inputs	RCA / Mini-XLR /XLR inputs	
5	Output	Two or more SDI outputs with embedded Audio	
6	Firmware Upgradation	Feature Required	
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
31. SITC OF SDI DISTRIBUTION AMPLIFIER			2
1	Input	2 x 3G/HD/SD-SDI inputs	

2	Output	6 x 3G/HD/SD-SDI distribution outputs with re-clock	
3	Audio	Should support embedded Audio SDI	
4	Input Control	Two input video sources should be controlled by A/B switch or GPI remote (non-locked)	
	Supported video formats:		
5	3G-SDI	1080P 50/59.94/60	
6	HD-SDI	1080P 23.98/24/25/30 1080i 50/59.4/60 720P 50/59.94/60	
7	SD-SDI	525i /625i	
8	Firmware Up-gradation	Feature Required	
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
32. SITC OF SDI TO HDMI CONVERTER			4
1	Input	1 x SDI, 1 x unbalanced audio	
2	Output	1 x HDMI, 1 x SDI (loop through)	
3	Output Resolutions	Video output format is the same as the input format	
4	Equalizer	Should be supported	
5	Reclock	Should be supported	
6	Firmware Upgradation	Feature Required	
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
33. SITC OF SDI AND HDMI TO USB CONVERTER FOR ONLINE VC MEETING			1
1	Type	SDI + HDMI -USB Capturing device	
2	Compatibility	Should be compatible with various operating systems	
3	Compatibility	Amcap, Google Plus Hangouts, OBS (Open Broadcast Software), Skype, VLC, Xsplit Broadcaster, Zoom.us Linux: VLC, OBS Mac OS X: OBS, Quick-time player, VLC, Face-time	
4	Input	1x HD/3G-SDI, HDMI Audio Input SDI Embedded Audio & 3.5 mm stereo in	

5	Output	1x USB 3.0 1x SDI Loop out	
6	Supported Input & Output Video Formats	1920 x 1080p 60/59.94/50/30/29.97/25/24/23.976 1920 x 1080i 60/59.94/50 (de-interlaced out) 1280 x 720p 60/59.94/50	
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
34. SITC OF UP/DOWN/CROSS CONVERTER			4
1	Type	Up/Down/Cross Conversion	
2	Input	VGA x 1, HDMI x 1 , HD/SD-SDI x 1 or better	
3	Output	SDI x 2, HDMI x 1, SDI Loop thru BNC or better	
4	Supported video output formats:	1080p60/59.94/50, 1080p30/29.97/25/24/23.98, 1080i60/59.94/50, 720p60/59.94/50, 525i, 625i	
5	Audio Format (Input):	Analog Audio L/R : stereo audio SDI / HDMI embedded audio	
6	Audio Format (Output):	SDI embedded audio up to 8CH, 48KHz, PCM audio HDMI embedded audio up to 8CH, 48KHz, PCM audio	
7	Firmware Up-gradation	Feature Required	
8	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
35. SITC OF 100 WATTS LED COOL LIGHTS FOR STUDIO			14
1	Type	100W LED Bi- colour light having temperature range from 3000K- 6000K complete with 4 leaf barn door, diffusers, normal operated yoke provided	
2	Lamp power	100W or better	
3	Color Temperature	3000K-6000K	
4	Dimming	0-100% Linearly adjustable through manual and DMX	
5	CRI	CRI:> 95 or better	
6	Beam Angle	110 deg	

7	Operating Temperature	-30°C to +55°C	
8	Light Body	Die Cast Aluminum	
9	Cooling System	Fan-Less no noise	
10	Protection Rating:	IP 20	
11	Mounting Accessory	Die cast aluminum "C" clamps and Safety bond 1.5Mtr long with lock clip	
12	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	

36. SITC OF 200 WATTS LED FRESNEL SPOT LIGHT FOR STUDIO

4

1	Type	200 W LED light(noiseless) with color temperature 3200K-5600K panel complete with 4 -leaf barn door, normal operated yoke, Ceiling mounted, integrated dimmer enabled instant dimming from 0 to 100%. Color conversion filter from Daylight to Tungsten	
2	Lamp power	200W or better	
3	Color Temperature	3200K - 5600K	
4	Dimming	0-100% through manual and DMX	
5	CRI	CRI:> 90 or better	
6	Beam Angle	10 -50 deg or 30- 60deg	
7	Operating Temperature	-30°C to +55°C	
8	Protection Rating:	IP 20	
9	Mounting Accessory	Die cast aluminum "C" clamps and Safety bond 1.5Mtr long with lock clip	
10	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	

37. SITC OF DIMMER CONTROL

1

1	Type	Professional 24-Channel or better DMX Lighting Console	
2	Feature Support	24 preset channels, assignable to 512 DMX channels	
3	Feature Support	Dimmer control via DMX or analog output	
4	Feature Support	Illuminated display/controls and Lamp socket for easy operation in dark stage environments	
5	Accessories	1x8 DMX Distribution unit	

6	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
38. FIELD LIGHT KIT (SET OF THREE)			1
1	Type	LED Kit for outdoor Broadcast applications- consisting of	
2		One no of 70W CCT Light having color temperature range from 2700K-5700K. With on light manual dimming, DMX dimming through 5-pin XLR connectors, 4-leaf barn door, and diffuser. CRI and TLCI should be above 96+	
3		Two nos. of 30W CCT Light having color temperature range from 2700K-5700K. With on light manual dimming, DMX dimming through 5-pin XLR connectors, 4-leaf barn door, and diffuser. CRI and TLCI should be above 96+	
4		One high quality fabric carry kit case to hold lights, adapter & power cables	
5		3-section air cushioned stands with Carry case	
39. SITC OF ENTERPRISE NAS WITH 48 TB STORAGE			1
1	Form Factor	3U 16-bay	
2	Onboard Host Ports	4 x 1Gb/s iSCSI ports, 2 x10Gig ports	
3	Number of Drives	Initially populated with 8 x 6TB Drives. Provision to Expand with Additional Drives in remaining Vacant Hard disk slots	
4	Drive Interface	6Gb/s SATA	
5	Disk Support	3.5" SATA 6Gb/s HDD, 6TB, 7200RPM	
6	File Level Protocol Support	CIFS/ SMB, AFP, NFS, FTP, WebDAV	
7	Block Level Protocol Support	FC, FCoE, iSCSI, SAS	
8	Object Protocol Support	RESTful API	
9	Cloud Gateway	Amazon S3, Microsoft Azure Cloud, Open Stack	
10	Feature Support	Should Support Expansion Enclosures for Future Expansion	
11	RAID levels supported	RAID 0,1,(1+0), 3, 5, 6, 10, 30, 50, 60	
12	Feature Support	Online expansion by Adding new drives, Copying and replacing drives with drives of larger capacity	

13	Feature Support	RAID migration Configurable stripe size and write policy per system	
14	Network Configuration	IPv6 support, Fixed or dynamic IP address, Dual Gigabit Ethernet with Jumbo Frame, Port trunking / NIC teaming/ Link aggregation (IEEE 802.3ad), DHCP client, MPIO, MC/S support	
15	Access Right Management	User account management, Group management, Folder management (Folder and subfolder access control)	
16	Feature Support	Folder quota, Comprehensive access control action items (All Controls, Read, Read & Run, Write, Modify, List), Support Windows Active Directory Authentication (Domain Users Login via CIFS/ SMB, AFP, FTP & file explorer), LDAP on Linux	
17	OS Support	Windows Server 2008 / 2008 R2 / 2012 / 2012 R2 (including Hyper-V), Windows 7 SP1 / Windows 8.1, RedHat Enterprise Linux, SUSE Linux Enterprise, Sun Solaris, Mac OS X, VMware, Citrix Xen Server	
18	Accessories	Should be supplied with 2 SFP+ Connectors to connect with Ethernet Switch on 10G network	
40. SITC OF 24 PORT ETHERNET SWITCH			1
1	Type	24 Port Ethernet Switch	
2	Layer	Layer 2 Switch	
3	Network Media	22 x 10/100/1000 Mbps, 2 x 10G SFP+	
4	No of Ports	24 Port	
5	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system	
41. SITC OF WORKSTATION FOR VIDEO EDITING			1
1	Chip	10-core CPU with 8 performance cores and 2 efficiency cores 24-core GPU 16-core Neural Engine 400GB/s memory bandwidth	
2	Memory	32GB unified memory	

3	Storage	1 TB SSD With External 4TB Storage on thunderbolt	
4	Video Support	<p>Simultaneously supports up to five displays:</p> <p>Support for up to four Pro Display XDRs (6K resolution at 60Hz and over a billion colors) over USB-C and one 4K display (4K resolution at 60Hz and over a billion colors) over HDMI</p> <p>Thunderbolt 4 digital video output supports</p> <p>Native Display Port output over USB-C</p> <p>Thunderbolt 2, DVI and VGA output supported using adapters (sold separately)</p> <p>HDMI display video output</p> <p>Support for one display with up to 4K resolution at 60Hz</p> <p>DVI output using HDMI to DVI Adapter (sold separately)</p>	
5	Audio	<p>Built-in speaker</p> <p>3.5 mm headphone jack with advanced support for high-impedance headphones</p> <p>HDMI port supports multi-channel audio output</p>	
6	Connections & Expansions	<p>Thunderbolt 4 (up to 40 Gbps)</p> <p>Display Port</p> <p>USB 4 (up to 40 Gbps)</p> <p>USB 3.1 Gen 2 (up to 10 Gbps)</p> <p>Two USB-A ports (up to 5 Gbps)</p> <p>HDMI port</p> <p>10Gb Ethernet</p> <p>3.5 mm headphone jack</p> <p>On front (M1 Max):</p> <p>Two USB-C ports (up to 10 Gbps)</p> <p>SDXC card slot (UHS-II)</p>	
7	Communication	<p>Wi-Fi</p> <p>802.11ax Wi-Fi 6 wireless networking</p>	

		<p>IEEE 802.11a/b/g/n/ac compatible</p> <p>Bluetooth</p> <p>Bluetooth 5.0 wireless technology</p> <p>Ethernet</p> <p>10Gb Ethernet (Nbase-T Ethernet with support for 1GB, 2.5GB, 5GB and 10GB Ethernet using RJ-45 connector)</p>	
8	Accessories	<p>24 inch 4K Display</p> <p>Final Cut Pro Video Editing software License</p> <p>Keyboard and mouse</p>	
42. SITC OF AMPLIFIED/POWERED SPEAKERS (PAIR)			1
1	TRANSDUCERS	<p>LF: 135 mm (5.25 in) low frequency loudspeaker or better</p> <p>HF: 19 mm (0.75 in) Polycarbonate dome tweeter or better</p>	
2	FREQUENCY RANGE	80 Hz - 20 kHz or better	
3	AMPLIFIER POWER	35 Watts per channel or better	
4	Accessories	All necessary cables and accessories should be supplied for completeness of the system	
43. SITC OF ONLINE UPS SYSTEM			1
1	UPS	10 KVA 1:1 (1 Phase In: 1 Phase Out) On-Line UPS System with 60 Minutes Backup	
2	Input Voltage	180 Volts Ac to 260 Volts Ac	
3	Input frequency	47 Hz to 53 Hz (generator compatible)	
4	Technology	IGBT High Frequency	
5	Output voltage	230 volts +/- 1%	
6	Output frequency	50 Hz +/- 0.01 %	
7	Total Harmonic distortion at output	< 2%	

8	DC Input voltage	180/192/220 volts 60 minutes back up at full load	
9	Battery isolation	DCCB	
10	Battery type	SMF/ VRLA	
11	Protections	I/P, O/P, Over charging and short circuit protections with audio alarm and bypass switch	
12	Output wave	Pure sine wave	
13	Inverter efficiency	➤ 90 %	
14	Batteries and Accessories	Suitable rated batteries to provide backup for 60 Min or more along with Battery Rack, interlink battery cables	
15	Accessories	All necessary cables and accessories should be supplied for completeness of the system	
44. SYSTEM INSTALLATION MATERIAL AND CHARGES			1
1	Cabling	It is required to set-up the facility for HD/SD operations, therefore all the cabling should seamlessly support required operation of the Studio.	
2	Installation Material	All installation materials including, power cables, interconnection cables, connectors and other accessories (required for installation of the complete system shall be quoted	
3	System Completeness	Completeness of the system will be responsibility of the bidder Any hardware and/or software including passive and active devices required for completeness of the technical workflow shall be quoted. Bidder shall be responsible for technical and operational completeness of the entire system.	
4	Workflow Diagram	The bidder has to provide schematic diagram of the technical workflow to ensure the workability of the offered solution in all respects.	
5	Any Additional Items to Complete the workflow	Bidder must mention any additional items require to complete the workflow with proper justification.	

ANNEXURE-II

DETAILS OF ACOUSTICS WORK FOR NISD, STUDIO WITH MATERIAL AND LABOUR				
S.No.	FEATURES	QTY	UOM	Suggested Brands
1	SITC OF STATE OF THE ART SEMI-CIVIL & ACOUSTICS WORKS/TREATMENT OF STUDIO : The vendor may visit "Present assigned rooms at NISD Building to physically ascertain customized requirements at site before quoting quantities and rates for various items under this head Studio Size Approx 27(L) x 21 (B) x 11 (H) Feet, Window Size Approx. 5 ft x 5.5 ft			
	The bidder should ensure that the noise level within the studio room is within 30 dB level. Bidders need to quote Unit rates so that actual cost can be calculated based on measurements.			
	Studio Wall 1 = LXH Studio Wall 2 = BXH Studio Wall 3 =LXH Studio Wall 4 = BXH			
1	Providing of Acoustic Treatment on the Studio Walls and Ceiling			
1.01	Rock Wool of 32 kg density to be filled between wall and 12 mm thick ply which will be finished with Laminate (inside of the studio) Covered with Virgin polythene and chicken mesh) should be used up to 3 feet from floor and to be filled between wall and 12 mm thick ply which will be finished with 1 mm laminate.	288	Sqft	Acoustic walls with Gyptech or Equivalent Ply - Green/Century/ Ecotech or equivalent Laminate :- Greenlam, Merino, Royal touch or equivalent"
1.02	Above 3 feet - Rockwool of 48 kg density to be filled between Wall and the perforated Gypsum. Rockwool should be covered with virgin polythene.	768	Sqft	Acoustic walls with Gyptech or Equivalent
1.03	Providing and Fixing of acoustics Grid Ceiling (600x600mm) with 15 mm grid system (NRC 0.7) and supports Ceiling shall also be acoustically treated with 50 mm thick layer of Rockwool of 40 kg density in a Grid of 2'x2' made up of wire mesh, which will be placed on the perforated	567	Sqft	Acoustic Grids of Gyptech or Equivalent

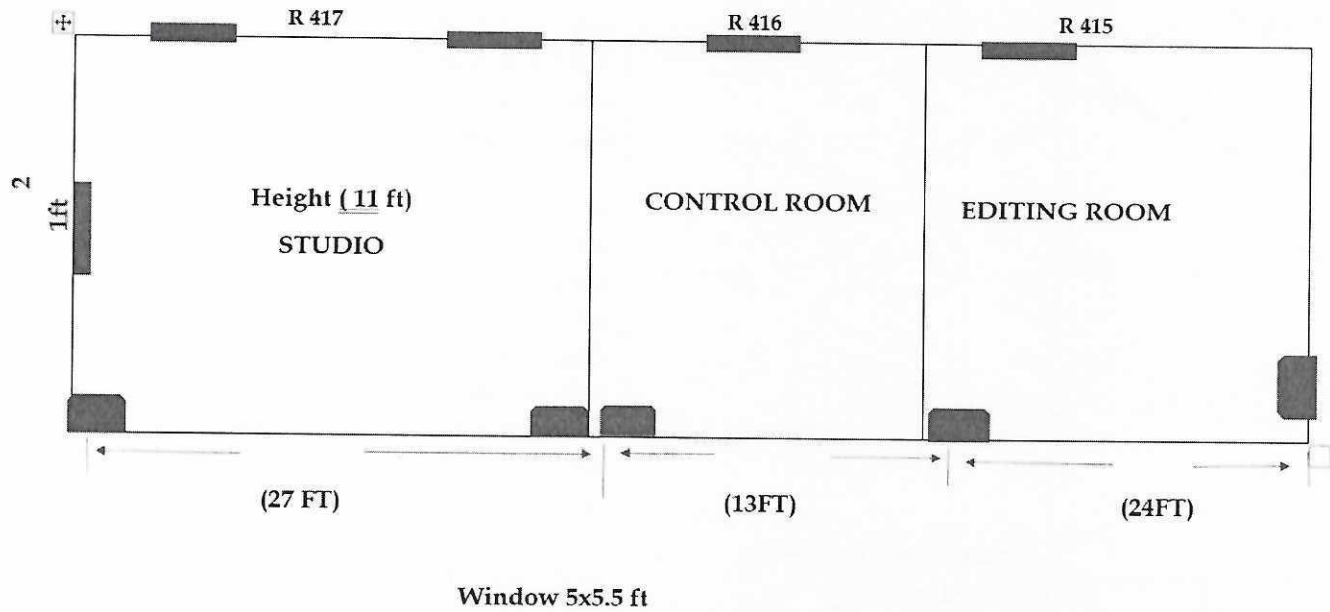
	Gypsum board, which will be further finished with the paint after jointing and taping			
1.04	Providing and making Observation window in existing Brick wall. 4ft x 3ft Providing 8 mm thick Sandwich toughened Glass Observation Window minimum gap between two glasses will be 2" frame work between Studio and PCR.	12	Sqft	Standard
1.05	Providing and fixing of acoustics 55 mm thick single leaf Door of size 7 x 3.5 ft with vision panel (Peeping window) of 12 inch x 12inch approx. and the door hardware including door closer, handle, lock and a door stopper Studio has 2 Entrance Doors	49	Sqft	CUSTOMIZED with Ply:- Greenply , Ecotech, Century or Equivalent. Laminate :- Greenlam, Merino, Royal touch or equivalent"
1.06	Studio Light Grid Providing and Installation of MS (Tube size 50 mm Dia) Studio Lighting grid of 4'x4' spacing and properly painted with two coats of primer and enamel paint with Proper power arrangement for Studio Lights and Cable trenches where ever is required for Studio Dimmer lights.	567	SqFt	Standard
1.07	Providing and laying of 2mm thick PVC flooring in Studio area	567	SqFt	Standard
1.08	Providing and Fixing of designer Anchor / Teacher Table of size of 9 ft length x 3 ft width x 2.5 ft height or better as per the set requirement with slight curves with laminate finish and proper edge binding in suitable ply	27	SqFt	CUSTOMIZED with Ply:- Greenply , Ecotech, Century or Equivalent. Laminate:- Greenlam, Merino, Royal touch or equivalent
1.09	Studio Set with good quality and aesthetically good looking Back drop around the 65 " Interactive Screen. Interactive Screen shall be embedded in the Set. The set will be made of combination of commercial ply and MDF of suitable thickness for the set. The Set will also have a raised platform of 100 thickness in front of the set. Necessary arrangements will be made for colour changing LED light strips at various points of the set.	1	Lot	CUSTOMIZED with Ply:- Greenply , Ecotech, Century or Equivalent. Laminate:- Greenlam, Merino, Royal touch or equivalent

1.10	Green Chroma Set 12 Feet wide, 10 Feet on Wall and at least 6 Feet on Floor with curved edge from Wall to floor. With Proper green fabric to provide rich Chroma key effect made up of ply and a carpet of green colour to be pasted on it.	192	SqFt	Standard
1.11	Closing of all glass windows/partitions with 12 mm MDF painted black from one side and mounted in front of the glass with drywall partition channels	3	Lot	Standard
1.12	Wooden Cable Tray - For laying of Cable between PCR and Studio. (Across the periphery of Studio and PCR)			Standard
1.13	Dismantling of Existing False ceiling tiles and grid.			
2	SITC OF STATE OF THE ART SEMI-CIVIL & acoustics WORKS/TREATMENT OF PCR			
	PCR Size 13'(L)x 21' (B) x11' (H)			
	PCR Wall 1 = LXH PCR Wall 2 = BXH PCR Wall 3 = LXH PCR Wall 4 = BXH			
	Providing of acoustics Treatment on the Studio Walls and Ceiling			
2.01	Rock Wool of 32 kg density to be filled between wall and 12 mm thick ply which will be finished with Laminate (inside of the studio) Covered with Virgin polythene and chicken mesh) should be used up to 3 feet from floor and to be filled between wall and 12 mm thick ply which will be finished with 1 mm laminate.	204	SqFt	Acoustic walls with Gyptech or Equivalent Ply - Green/Century/ Ecotechor equivalent Laminate :- Greenlam, Merino, Royal touch or equivalent"
2.02	Above 3 feet - Rockwool of 48 kg density to be filled between Wall and the perforated Gypsum as being proposed for acoustics Rockwool should be covered with virgin polythene.	544	SqFt	Acoustic walls with Gyptech or Equivalent
2.03	Providing and Fixing of acoustic Grid Ceiling (600x600) with 15 mm grid system (NRC 0.7) and supports Ceiling shall also be acoustically treated with 50 mm thick layer of Rockwool of 40 kg density in a Grid of 2'x2' made up of wire mesh, which will be placed on the perforated	273	SqFt	Acoustic Grids of Gyptech or Equivalent

	Gypsum board, which will be further finished with the paint after jointing and taping			
2.04	Providing and fixing of acoustics 55 mm thick single leaf Door of size 7 x 3.5 ft with vision panel (Peeping window) of 12 inch x 12inch approx and the door hardware including door closer, handle, lock and a door stopper	24.5	SqFt	CUSTOMIZED with Ply:- Greenply , Ecotech, Century or Equivalent. Laminate :- Greenlam, Merino, Royal touch or equivalent"
2.05	Providing and laying of 2mm thick PVC flooring	273	SqFt	Standard
2.06	Providing and Fixing of Technical Table at PCR of size 15(L) X 3F(B) X 2.5(H) with Extended Slanted extention for Equipement placement above 2.5feet of approx 900mm with laminate finish and suitable suitable ply. It should also have a provision for cable laying trench, power distribution units for equipment to be placed on technical table.	45	SqFt	CUSTOMIZED with Ply:- Greenply , Ecotech, Century or Equivalent. Laminate :- Greenlam, Merino, Royal touch or equivalent"
2.07	Providing and Fixing of Cabinets 7ft x 3 ft & 450mm depth (approx), made up of commercial board with Shutters in Prelam MDF	21	SqFt	CUSTOMIZED with Ply:- Greenply , Ecotech, Century or Equivalent. Laminate :- Greenlam, Merino, Royal touch or equivalent"
2.08	Closing of all glass windows/partitions with 12 mm MDF painted black from one side and mounted in front of the glass with drywall partition channels	1	Job	Standard
2.09	Wooden Cable Tray - For laying of Cable between PCR and Studio.	1	Job	Standard
3	EDIT ROOM			
3.01	Providing and Fixing of Technical Table at EDIT area of size 15(L) X 2.5 F(B) X 2.5(H) with laminate finish and proper edge binding in suitable ply. It should also have a provision for cable laying trench, power distribution units for equipment to be placed on technical table.	37.5	SqFt	CUSTOMIZED with Ply:- Greenply , Ecotech, Century or Equivalent. Laminate :- Greenlam, Merino, Royal touch or equivalent"

4	SOUNDLOCK AND PASSAGE WORKS Bidder has to make a sound lock area of approx size 4 ft x 5ft at the entrance of Studio			
4.01	Sound lock area to be made inside the studio and should be treated with acoustics works. Partition wall to be made of size 4 ft x 5 ft			
4.02	Rock Wool of 32 kg density to be filled between wall and 12 mm thick ply which will be finished with Laminate (inside of the studio) Covered with Virgin polythene and chicken mesh) should be used Up to 3 feet from floor and to be filled between wall and 12 mm thick ply which will be finished with 1 mm laminate.	27	SqFt	Acoustic walls with Gyptech or Equivalent Ply - Green/Century/ Ecotech or equivalent Laminate :- Greenlam, Merino, Royal touch or equivalent"
4.03	Above 3 feet - Rockwool of 48 kg density to be filled between Wall and the perforated Gypsum as being proposed for acoustics Rockwool should be covered with virgin polythene.	81	SqFt	Acoustic walls with Gyptech or Equivalent
4.04	Providing and Fixing of acoustic Grid Ceiling (600x600) with 15 mm grid system (NRC 0.7) and supports Ceiling shall also be acoustically treated with 50 mm thick layer of Rockwool of 40 kg density in a Grid of 2'x2' made up of wire mesh, which will be placed on the perforated Gypsum board, which will be further finished with the paint after jointing and taping	20	SqFt	Acoustic Grids of Gyptech or Equivalent
4.05	Providing and fixing of acoustics 55 mm thick single leaf Door of size 7 x 3.5 ft with vision panel (Peeping window) of 12 inch x 12inch approx and the door hardware including door closer, handle, lock and a door stopper	24.5	SqFt	CUSTOMIZED with Ply:- Greenply , Ecotech, Century or Equivalent. Laminate :- Greenlam, Merino, Royal touch or equivalent"
5	ELECTRICAL WORK			
5.01	The electrical points should be sufficient for lights and equipment and should be of standard makes modular switches and sockets, with short circuit and overload protection. Studio, Sound lock and PCR Should be equipped with 2x2 LED Panel Lights in Sufficient quantity to illuminate the operational area With separate switches. The bidder should use good quality copper wires and PVC tray etc to carry wires and cables etc.	1	Lot	Filolex/ POLYCAB/ RR CABLE or equivalent PVC Tray/conduit - Polycab/ BEC/ AKG Anchor/Legrand or Equivalent

NISD BROADCAST STUDIO LAYOUT



Details of Bidder/Tenderer

1.	Name of Tenderer /Company Name	
2.	Registration Number	
3.	Registration Address	
4.	Name of Partners/ Directors	
5.	Bidder Type (Indian /Foreign)	
6.	City	
7.	State	
8.	Postal Code	
9.	Company's Establishment Year	
10.	Company's Nature of Business	
11.	Company Category (Micro unit as per MSME/ Small Unit as per MSME/Medium Unit as per MSME/ Ancillary Unit/ Project affected person at this Company /SSI/Other	
12.	Contact Details(Enter Company Contact Person Details)	
13.	Contact Name	
14.	Date of Birth(DD/MM/YY)	
15.	Correspondence Email (Correspondence Email ID can be same as your login ID if available on CPP Portal. All the mail correspondence will be sent only to the correspondence email ID).	
16.	Company Legal Status (Limited /Undertaking/ Joint Venture/ Partnership/Other).	
17.	Designation	
18.	Phone	
19.	Mobile	
20.	Registration Details	
	a) PAN No. / Tan No. (Attach Proof)	
	b) Service Tax Registration No.	
	c) Sale Tax Registration No.	
21.	Details Of Earnest Money Deposit	
	a) Amount (Rupees)	
	b) Mode of submission	
	c) Details	
22.	Turnover Of Five previous financial years	
	a) 2017-2018	
	b) 2018-2019	

	c) 2019-2020	
	d) 2020-2021	
	e) 2021-2022	
23.	The bidder should have setup/commissioned at least two broadcast studios in the last five financial years (2017-2022) anywhere in India, where the value of the purchase order should not be less than Rs. 1 Cr (Rs. One crore) each. Proof of the same including copies of purchase order, completion certificate and details of contact person to be provided.	Yes <input type="checkbox"/> No <input type="checkbox"/>
24.	Whether Agency has been black listed by any of the Department/ Organization (Attach undertaking on the letter head of the Firm).	
25.	Firm must provide customer satisfaction letter from customers from Govt. Department / PSU / Autonomous Body, while submitting the technical bids.	

This is to certify that we have carefully read the contents at the tender document and fully understood all the terms and conditions therein and undertakes myself/ ourselves to abide by the same.

Place:

Signature of the Tenderer

Date:

Name of the Firm/Company

Make, Model No. and Country of Origin of the equipment quoted

Sl. No.	Item	Quoted		
		Make	Model No.	Country of Origin
1.	BROADCAST QUALITY 4K CAMCORDER FOR OUTDOOR AND INDOOR SHOOT			
2.	BROADCAST QUALITY PTZ CAMERA			
3.	REMOTE CONTORL PANEL FOR PTZ CAMERA			
4.	TRIPODS WITH DOLLY FOR CAMERA LOAD			
5.	TRIPOD WITH DOLLY FOR CAMERA AND TP LOAD			
6.	TELEPROMPTER SYSTEM			
7.	LAPTOP COMPUTER/LAPTOP SYSTEMS FOR TELEPROMPTER			
8.	DIGITAL VIDEO PRODUCTION SWITCHER FOR TV STUDIO			
9.	TRACKLESS VIRTUAL STUDIO SYSTEM			
10.	LED SMART DISPLAY PANEL FOR PCR MULTIVIEW			
11.	SMART LED DISPLAY PANEL FOR STUDIO FOLDBACK			
12.	4K (UHD) INTERACTIVE DISPLAY PANEL			
13.	FIELD MONITOR AND RECORDER(SSD)			
14.	AUDIO DELAY UNIT			
15.	VIDEO STREAMING ENCODER			
16.	VIDEO RECORDER AND PLAYER			
17.	PROFESSIONAL SSD BASED DIGITAL VIDEO RECORDER & PLAYER WITH INBUILT DISPLAY			
18.	16 CHANNEL ANALOG AUDIO MIXER CONSOLE			
19.	AMPLIFIED/POWERED SPEAKERS (PAIR)			
20.	DIGITAL SIGNAL PROCESSOR			
21.	AUDIO AMPLIFIER			
22.	TWO WAY LOUD SPEAKERS			
23.	WIRELESS LAPEL MICROPHONE			
24.	LAPEL MICROPHONE			
25.	WIRELESS HANDHELD MICROPHONE			
26.	EAR PIECE FOR ANCHOR			
27.	WIRELESS LAPEL MICROPHONE FOR OUTDOOR WITH CAMERA MOUNTABLE RECIEVER			
28.	SHOTGUN MICROPHONE			

29.	PROFESSIONAL HEADPHONE			
30.	AUDIO EMBEDDER			
31.	SDI DISTRIBUTION AMPLIFIER			
32.	SDI TO HDMI CONVERTER			
33.	SDI AND HDMI TO USB CONVERTER FOR ONLINE VC MEETING			
34.	UP/DOWN/CROSS CONVERTER			
35.	100 WATTS LED COOL LIGHTS FOR STUDIO			
36.	200 WATTS LED FRESNEL SPOT LIGHT FOR STUDIO			
37.	DIMMER CONTROL			
38.	FIELD LIGHT KIT (SET OF THREE)			
39.	ENTERPRISE NAS WITH 48 TB STORAGE			
40.	24 PORT ETHERNET SWITCH			
41.	WORKSTATION FOR VIDEO EDITING			
42.	AMPLIFIED/POWERED SPEAKERS (PAIR)			
43.	ONLINE UPS SYSTEM			
44.	SYSTEM INSTALLATION MATERIAL			

COMPLIANCE STATEMENT

S.No.	Eligibility Criteria	Whether complied Yes/No	Page No. in Bid Document Where details are available
1.	The bidder should be a company registered in India		
2.	The bidder should be either the manufacturer (OEM) and/or the authorized representative for supply and maintenance of all the studio equipment mentioned in Annexure-I		
3.	The bidder should be "Class-I local supplier" or "Class-II local supplier" as defined under the Department for Promotion of Industry and Internal Trade (Public Procurement Division) Order dt 16 th September 2020 on "Public Procurement (Preference to Make in India), Order 2017-Revision regarding" . Please indicate whether you are Class-I or Class-II local supplier.		
4.	As mentioned in para 9 of the above order, the Class-I local supplier/Class-II local supplier at the time of bidding is required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for Class-I local supplier/Class-II local supplier, as the case may be. They shall also give details of the location(s) at which the local value addition is made. The percentage should be indicated separately for the Equipment and for overall including equipment, Acoustic work, Installation, Training and any other charges (AMC not to be included).		
5.	Bidder should be fully compliant with Department of Expenditure (Public Procurement Division) Order (Public procurement No. 1) dated 23 rd july 2020 on "Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) 2017".		

6.	Bidder should provide the certificate(s) as mentioned in the Eligibility condition No. 8 regarding "Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) 2017"		
7.	The bidder should have minimum of ten year experience in setting up of Broadcast studios. This would include - (i) Supply, Integration, Installation, Testing, Commissioning of equipment mentioned in Annexure-I and providing after sales service/AMC for the equipment and (ii) Preparing the studio and control room including the acoustic work. Proof to be provided.		
8.	The bidder should have setup/commissioned at least two broadcast studios in the last five financial years (2017-2022) anywhere in India, where the value of the purchase order should not be less than Rs. 1 Cr (Rs. One crore) each. Proof of the same including copies of purchase order, completion certificate and details of contact person to be provided.		
9.	The annual turnover of the bidder company should not be less than Rs. 2Cr (Rs. Two Crore) per year for any three financial years during the previous five financial years (2017-2022). Proof of the same to be provided.		
10.	The Bidder should have Office /Service Centre in Delhi /NCR. Address and contact details to be provided with documentary proof.		
11.	The Bidder should provide complete workflow / Schematic Diagram of the Broadcast Studio Equipment.		

SPECIFICATION FOR NISD BROADCAST STUDIO EQUIPMENT

S.No.	FEATURES	SPECIFICATIONS	Whether complied Yes/No	Page No. in Bid Document where details are available
1. SITC OF BROADCAST QUALITY 4K CAMCORDER FOR OUTDOOR AND INDOOR SHOOT				
	Camera			
1	Image sensor	1/3" or 1/2" Three MOS/CMOS Sensor or 1" MOS/ CMOS Single chip Image Sensor		
2	Effective Pixels per Sensor	15 Megapixel or more		
3	Lens	The camcorder should have integrated Zoom Lens with Optical Zoom ratio of 15X or better with manual three rings for control of zoom, iris and focus and Min 10x Digital Zoom		
4	Optical Image stabilizer	Required		
5	Sensitivity	F12 or better on (2000 lx, 3200 K, 89.9 reflect		
6	Horizontal Resolution	2,000 TV lines or more (3840 x2160p mode) or better 1,000 TV lines or more (1920 x1080p mode) or better		
7	Monitor/Viewfinder	3.5" type TFTLCD/Led color monitor and 0.25 type OLED/LCD Viewfinder(or better)		
8	Essential Features	It should have slow and fast motion recording and reproduction facility.		
9	Essential Features	The camcorder should also have 3.5" or larger LCD /Led colour monitor		
10	Video / Audio Output	The camcorder should have 3G/HD-SDI output, HDMI out and microphone/line input on XLR. Besides, it should also have USB port.		

11	Memory card Slots	The camcorder should be able to record on memory cards. It should have at least two memory card slots which should enable relay recording/ simultaneous or backup recording for enhanced reliability.		
12	Gain Selections	Variable from 0 dB to + 18 dB or better in steps		
13	White Balance	Auto I Preset /Variable		
14	Signal to Noise Ratio	60 dB or better		
15	Optical Zoom	15 X or better		
16	Slow and Quick Motion Function	Yes Desired		
17	Recording format	<p>UHD (3840 x 2160) :</p> <p>HEVC Long GOP 150 Mbps (4:2:0) with MOV wrapper and</p> <p>MPEG-4 AVC/ H.264 Long GOP 150 Mbps (4:2:2) with MOV wrapper or</p> <p>XAVC - L QFHD MPEG-4 AVC / H.264 150 Mbps with MXF wrapper or</p> <p>MPEG-4 AVC / H.264 150 Mbps with QuickTime wrapper</p> <p>HD (1920 x 1080):</p> <p>MPEG-4 AVC / H.264 Long GOP 50 Mbps (4:2:2) with MOV wrapper or</p> <p>XAVC - L HD MPEG-4 AVC/ H.264 50 Mbps and MPEGHD422 50 Mbps with MXF wrapper</p> <p>or MPEG-4 AVC / H.264 50 Mbps and</p> <p>MPEG-2 Long GOP with QuickTime wrapper</p>		
	Video/Audio Recording			
18	Recording Media	SXS/SDHC/SDXC/ Micro P2 Memory card		
19	Recording resolution	<p>3840 × 2160 (UHD),</p> <p>1920 × 1080 (FHD),</p> <p>1280 × 720 (HD)</p> <p>720 × 480 (SD),</p> <p>720 × 576 (SD)</p>		
20	Recording Formats	XAVC/MOV(AVC)/MOV(HAVC)/AVCHD		

21	Live Streaming	Network Protocol: RTSP/RTP/RTMP Video Compression Format: H.264/MPEG4 AVC Main Profile, High Profile Audio Compression Format: AAC LC		
	Interfaces			
22	Video Output:	BNCx1HD-SDI, SD-SDI		
23	HDMI Out:	HDMI:4:2:2/10 bit UHD / HD /SD format support		
24	Audio Input:	XLR-type 3-pin (female) (x1)		
25	Audio Output:	3.5 mm diameter stereo mini jack x 1,		
	Accessories	Battery, Battery charger, AC adaptor, AC cable, Microphone holder kit, Shoulder strap, Eye cup.		
26	Additional battery (with each Camcorder)	Qty 1x Additional Batteries		
27	Memory Card (with each Camcorder)	Qty 2x 64GB Memory cards Compatible with camera for 4k recordings		
28	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
2. SITC OF BROADCAST QUALITY PTZ CAMERA				
1	Type	4K PTZ Camera		
2	Image Sensor & No Of Effective Pixels	1/2.5" 4K MOS/CMOS/EXMOR or better sensor, No of effective pixels approximately 8.5M		
3	Optical Zoom and Digital Zoom	20x or better optical zoom 25X or better Digital Zoom		
4	Min. Illumination	1-3 Lux or Lower		
5	Focus	Auto / Manual		
6	Horizontal Resolution	4K : 1500 TV lines HD: 1000 TV lines or Better		
7	White Balance	Auto White Balance		
8	Pan Range	Pan: $\pm 170^\circ$ or better		
9	Tilting Range	Tilt: $+90^\circ$ to -20° or better		
10	Preset	upto 100 Positions		
11	Pan Tilt Speed	0.1°/s to 160°/s or better		
12	Control	Serial / IP		
13	Video Output	HDMI x 1, 3G/HD - SDI x 1, (4K at HDMI, IP (Streaming) & HD at 3G SDI OUT (BNC)		

14	IP Output	Should have NDI HX Video over IP output		
15	Audio Input	3.5mm Line in		
16	Channel	2		
17	Video format	HDMI 2160/29.97p/25p 1080p 59.94/50/29.97/25 1080i 59.94/50 720p 59.94/50 SDI 1080p 59.94/50/29.97/25 1080i 59.94/50 720p 59.94/50		
18	IP (streaming)	RTMP, SRT, NDI HX		
19	Horizontal viewing angle	Approx. 70° or better		
3. SITC OF REMOTE CONTORL PANEL FOR PTZ CAMERA				
1	PTZ Camera Control	PTZ camera remote controller compatible with above camera		
2	Control functions	Pan, Tilt, and Zoom, Iris, Focus,		
3	Joystick	2-Axis Joystick		
4	Control functions	Should be able to control 100 cameras on IP		
5	Display	LCD screen displays menus & key camera		
6	Feature	Easy management of up to 100 PTZ camera presets		
4. SITC OF TRIPODS WITH DOLLY FOR CAMERA LOAD				
1	Section	Two-Stage Aluminum Tripod System		
2	Payload	5 kg or better		
3	Ball diameter	75mm or better		
4	Section	2 STAGE		
5	Dolly	Compatible Dolly		
6	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
5. SITC OF TRIPOD WITH DOLLY FOR CAMERA AND TP LOAD				
1	Section	Two-Stage Aluminum Tripod System		
2	Payload	16 kg or better		
3	Ball diameter	100 mm or better		

4	Section	2 STAGE		
5	Dolly	Compatible Dolly		
6	Pan Bars	Dual Pan Bars		
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
6. SITC OF TELEPROMPTER SYSTEM				
1	Type	Teleprompter System for Mounting PTZ Camera. Should be mountable on tripod and/or support stand. Suitable Stand to bear the payload of TP mount and PTZ Camera Should be quoted.		
2	Mounting Hardware & Monitor	15" or better Professional Display along with Teleprompter mounting Hardware, Brightness : 350 Nits or better Screen Resolution :1024x768 or better Reverse/Rotation : 4 way picture orientation Video: Autosensing PAL/ NTSC/VGA Composite		
3	Controller	Should be supplied with 8 Button desktop hand control device that should support adjustment of the speed and direction of scrolling text on the prompter. Should support quick command buttons for navigation around the script and trigger configurable commands		
4	Feature Support	Teleprompter software with following features support Adjustable Font Size Date & Time Display Story editing on the fly Hold & Block Stories Import RTF, DOC, HTML User- friendly Interface Should be supplied with suitable I/O interface to connect with Camera Mount Teleprompter Display		
5	Feature Support	TP Should be able to Show the Presentation (PPT)		

6	Teleprompter Terminal	Teleprompter should be supplied with latest configuration PC/Laptop & peripherals with latest licensed windows OS and should have robust teleprompting software designed for professional shoots with ability to easily import MS word, .txt, and .rtf files.		
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
7. LAPTOP COMPUTER/LAPTOP SYSTEMS FOR TELEPROMPTER				
1	Type	Laptop		
2	Processor	min. latest generation i5 Processor		
3	Ram	8GB or better		
4	Hard disk (SSD)	1 TB or better		
5	Screen size	15" in case of laptop		
6	Interfaces	HDMI interface for extended display		
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
8. SITC OF DIGITAL VIDEO PRODUCTION SWITCHER FOR TV STUDIO				
1	Inputs	Total 12 or more inputs in combination of IP, 3G/HD/SD-SDI or 3G/HD/SD-SDI, HDMI It should be compatible with workflow		
2	Outputs	Total 4 or more output in combination of IP, 3G/HD/SD-SDI or 3G/HD/SD-SDI, HDMI It should be compatible with workflow		
3	Video Format	1080p: 59.94, 50, 29.97, 25 1080i: 59.94, 50 720p: 59.94, 50, 29.97, 25 576i 50		

4	Features	Switcher should have Seamless switching facility, Multilayer Effects, 2D DVEs, Chroma Key as standard feature. Virtual Studio system either inbuilt or External Virtual System to be quoted by bidder* Detailed Specification of Virtual is mentioned below		
5	CG Software	CG Software: External / Inbuilt CG software to create still graphics and overlay on program Out		
6	Hardware Control Panel	Switcher Should have at least 8 Direct Source Button Control panel		
7	Software Control Panel	Should support Software Control Panel		
8	Mix Effect Buses	1 ME with 4 full function keyers plus transition keyer or better		
9	Chroma Key	Minimum 1 chroma keyer		
10	DVE	2 (2D) floating DVES to be utilized in any keyer in the system		
11	Wipe Generator	Built-in Wipe Generator for M/E		
12	Pattern Generator	Minimum 2 Pattern Generators		
13	Frame Syncs & Format Converters	6 or more freely-assignable Frame Syncs & Format Converters		
14	Multi-viewer	1 Built in Multi-Viewer with tally, source names, and clock. Configurable Minimum 10 windows.		
15		Bidder can quote System with above specs and to comply it bidder may add converters, Distribution amplifier, Peripherals Etc. to qualify the specs and to complete the workflow Converters should be standard brand, any substandard brand will not be acceptable		
9. SITC OF TRACKLESS VIRTUAL STUDIO SYSTEM				
1	Type and features	Integrated Virtual Studio, Switcher, Graphics Overlay, Recording and Streaming system		
2	Live Streaming	Should be possible		
3	Virtual Studio	Min. 25 standard Virtual sets along with the system		
4	Recording	H.264 / MPEG-2		
5	DSK and CG	2x DSK to add CG and animations to the scene		

6		Additional Features in case External Virtual System is quoted		
7	Inputs	2 live inputs and should support Trackless Virtual Studio		
8	Video Input	Two 3G/HD-SDI and one AUX		
9	Video Output	Two 3G/HD-SDI and one AUX		
10	Format Support	1080p 50,25 1080i 60/59.94/50, 720p 60/59.94./50		
11	Audio Input	SDI audio embedded x 2 HDMI audio embedded x 1 Mini Phone Jack x 2		
12	Keyer	Chromakey / Luminance key x 2		
13	Should Include	500GB or better Media Cartridge		
14	Hardware	Suitable Hardware with complete accessories to run 3D Trackless virtual system		
15	Display	Should be quoted with one 21" FHD or bigger Monitor		
16	Control Panel	Virtual System should be supplied with Hardware control Panel with at least 10 functional keys, T- Bar, Program/Preset Rows with buttons		
10. SITC OF LED SMART DISPLAY PANEL FOR PCR MULTIVIEW				
1	Screen Size (Diagonal)	49" - 52"		
2	Resolution (H x V)	3840 X 2160		
3	Aspect ratio	16:9		
4	Viewing Angle (Horizontal/Vertical)	178° / 178°		
5	Inputs	HDMI 2.0 X 3, USB 2.0 X 1, RJ45 X 1,		
6	OS	Smart OS either Android or Native OEM OS		
11. SITC OF SMART LED DISPLAY PANEL FOR STUDIO FOLDBACK				
1	Screen Size (Diagonal)	55"		
2	Resolution (H x V)	3840 X 2160		
3	Aspect ratio	16:9		
4	Viewing Angle (Horizontal/Vertical)	178° / 178°		

5	Inputs	HDMI 2.0 X 3, USB 2.0 X 1, RJ45 X 1,		
6	OS	Smart OS either Android or Native OEM OS		
7	Mount	Pedestal for Foldback		
8	Sound Output	10 Watt or More		
12. SITC OF 4K (UHD) INTERACTIVE DISPLAY PANEL				
	DISPLAY			
1	Screen Size (Diagonal)	75 inch		
2	Aspect Ratio	16:9		
3	Resolution	3,840 x 2,160 (UHD)		
4	Brightness	300 cd/m ² or better		
5	Contrast Ratio	1200:1 or better		
6	Response Time	10 ms or better		
7	Viewing Angle (Horizontal / Vertical)	176 degrees / 176 degrees		
8	Panel Life	30000 hours or better		
	TOUCH PANEL			
9	Detection Method	Infrared		
10	Touch operation	Min 12 Touch points or better		
11	OS Support	Windows 10 or above		
12	Input	HDMI Type A x 2, Component/RGB x 1, USB : at least 3 USB ports		
13	Output	HDMI		
14	Slots	Should have slot to directly integrate PC in the Interactive Display Should be quoted with PC mountable on Interactive Display with Min i5 Processor, 8GB RAM, 250GB SSD or better		
15	Built in Speaker	15 Watt or better		
16	OPS	Should Have OPS slot and OPS computer with Min i5 Processor, 8GB RAM, 240GB SSD and Windows OS should be quoted		
13. SITC OF FIELD MONITOR AND RECORDER (SSD)				
1	Screen Size	7" or better touch screen Camera Mount Monitor & Recorder		
2	Resolution	1920 x 1080 or better		

3	Brightness (cdm2 / nits)	1000 nits or better		
4	Video Input	1xHDMI, 1x4K SDI 12G/6G or HD - SDI 3G/1.5 G, uncompressed 10 bit or 8 bit 422		
5	Video Output	1xHDMI, 1x4K SDI 12G/6G or HD - SDI 3G/1.5G , uncompressed 10 bit or 8 bit 422		
6	Feature	Should be used as Viewfinder for Camcorder and should also have Recording Facility		
7	Audio In/Out	HDMI, SDI and Analogue Audio in and out via XLR		
9	Recording Formats	ProRes, DNxHD, H.264		
10	Power	DC Power as well as Battery operated(Min 2 Hrs Backup)		
11	Accessories	2x SSD 480GB (For 4K Recording) or better should be supplied		
12	Accessories	1x SSD reader should be supplied		
13	Accessories	Suitable camera mount attachment , compatible XLR Cable with carry case should be supplied		
14. SITC OF AUDIO DELAY UNIT				
1	Type	Audio Delay unit with up to 3000ms		
2	Audio Input	3 x balanced stereo audio / Microphone (3 Pin XLR / 1/4" (6.3mm) Socket) 2 x unbalanced stereo audio, RCA sockets		
3	Audio Output	2 x balanced stereo audio, XLR connectors 2 x unbalanced stereo audio, RCA sockets 1 x 3.5mm Stereo headphone		
4	Phantom Power	Switchable for Microphone input		
5	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
15. SITC OF VIDEO STREAMING ENCODER				
1	Application	Video streaming server with Dual Streaming out		
2	Video Input	SD/HD SDI,HDMI		

3	Audio Input Analog	SDI & HDMI embedded audio, RCA L/R x1		
4	Video Bitrate	Record Only: Up to 16Mbps (1080p50/60) Stream Only: Up to 10Mbps (1080p50/60) Rec + Stream: 36Mbps (1080p50/60)		
5	Streaming Platforms	Should support simultaneous streaming to any two platforms like YouTube, Facebook or websites		
6	Recording	Simultaneous recording in H.264 MP4 format while streaming in RTMP, RTMP, RTSP, TS, or SRT.		
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

16. SITC OF VIDEO RECORDER AND PLAYER

1	Application	File Based Multichannel Video Recorder / Player with Monitor Display in built		
2	Slots	Should have Two slots for SSD		
3	Inputs	1x 3G/12G-SDI 3x 3G-SDI 1x HDMI Analog Audio (Balanced),		
4	Output	1x 3G/12G-SDI 1x HDMI Analog Audio (Balanced),		
5	Reference	Reference Input required		
6	Storage	2x 500GB SSD storage module with either built in USB 3.0 connection or to be Supplied with 1x External Dock to read SSD.		
7	File Format support	Quick Time .MOV H.264, Apple Pro res		

17. PROFESSIONAL SSD BASED DIGITAL VIDEO RECORDER & PLAYER WITH INBUILT DISPLAY

1	Display Size	19" or better		
2	Resolution	1920 x 1080 or Better		

3	Bit depth	10-bit or better		
4	Brightness	1200nit or better		
5	Video Input	Selectable Dual 12G/6G/3G/1.5G SDI HDMI (2.0)		
6	Video Output	SDI 1x 4K-SDI 12G/6G/3G/1.5G, HDMI (2.0)		
7	Audio In/Out	8 Channel in HDMI 24 bit and SDI embedded or better Line in / Mic in Headphone out		
8	Format Support	720p 50/60, 1080i 50/60 1080pSF 24/25/30 1080p 24/25/30/50/60/100/120 2160p 24/25/30/50/60		
9	Power	DC input direct or through adaptor		
10	Recording Media	Min 2 x 500GB SSD with Suitable enclosure should be supplied		
11	Genlock	Required		
12	Docking Device	External docking device with USB 3.0 connector for connection of above SSD with Host computer Min 1x Per Recorder		
13	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

18. SITC OF 16 CHANNEL ANALOG AUDIO MIXER CONSOLE

1	Mixing Channels	16 Channel or better Audio Mixer with Min. 12 Mic Pre amps on Balanced XLR		
2	AUX	4 x Pre/Post or better		
3	Subgroups	4 mono/2 stereo or better		
4	Mic inputs	MIC: 12		
5	Phantom Power	Phantom Power on all mic channels		
6	Fader	Sliding		
7	USB Interface	2-in/2-out		
8	Bands	4-band		
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

19. SITC OF AMPLIFIED/POWERED SPEAKERS (PAIR)

1	Type	2 Way Active Studio Monitor		
2	Frequency Range	50 Hz-18 kHz or better		
3	Max Peak SPL	100 dB or better		

5	LF Driver Size	Min. 5" to Max. 6.6"		
6	HF Driver Size	1" or better		
7	Low-Frequency Amplifier Power	40 watts or Better		
8	High-Frequency Amplifier Power	40 watts or Better		
9	Total Power Output	80 Watt or Better		
10	Input Types	1 x XLR, 1 x TRS Balanced		
11	AC Input Voltage	100-240 VAC +/- 10% 50/60 Hz		
12	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

20. SITC OF DIGITAL SIGNAL PROCESSOR

1	Feature	Networked Digital Signal Processor		
2	Input	12 Analog Inputs (with 48v Phantom Power per Channel)		
3	Output	8 Analog Outputs		
4	GPIO	12 Control Inputs and 6 Logic Outputs for GPIO Integration or better		
5	Indicators	Front Panel LED Indication		
6	Analog Inputs	12 electronically balanced		
7	Mic/Line Inputs	Nominal gain 0dB, electronically switchable up to +48dB, in +6dB steps		
8	CMRR	75dB at 1KHz or better		
9	Phantom Power	48V nominal, selectable per input		
10	Analog Outputs	8 electronically balanced		
11	Frequency Response	20Hz-20KHz or Better		
12	Dynamic Range	108dB typical or better		
13	Control Ports	12 inputs and 6 outputs		
14	Control Network	RJ45 Ethernet connector		
15	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

21. SITC OF AUDIO AMPLIFIER

1	Type	4 channel amplifier with Network control, DSP, Monitoring Class D or better		
2	Output Power	100W per channel output or better		
3	Frequency response	20Hz - 20kHz +/-0.5dB		

4	Input Impedance	20 k Ω balanced, 10 k Ω unbalanced		
5	Crosstalk	80dB or better		
6	Voltage Gain	4/8 Ω , 70V rms and 100V rms Operation : 34dB		
7	Common Mode Rejection	70dB or better		
8	S/N ratio	104dB or better		
9	DSP	On-board Digital Signal Processor		
10	Other Features	Input Router <ul style="list-style-type: none"> • Input Delay – Up to 1000ms • Input Parametric EQ – 8 band • Crossover • Output Parametric EQ – 8 band • Output Delay – Up to 100ms 		
11	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

22. SITC OF TWO WAY LOUD SPEAKERS

1	Type	Two-way Min. 5" to Max 6.5" Wall Mount Speaker		
2	Frequency range	85 Hz – 18 kHz or Better		
3	Nominal coverage	120°H x 120°V		
4	Components	5.25 inch LF and 0.75 inch HF (+- 5%,)		
5	Power Capacity	60 Watts		
6	Nominal impedance	8 ohms		
7	Transformer Taps	10 W, 5 W (& 2.5W @ 70V)		
8	SPL	100 dB at 8 Ohm or Better		
9	Accessories	Wall-mounting system		
10	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

23. SITC OF WIRELESS LAPEL MICROPHONE

	Receiver			
1	Switching bandwidth	30 MHz or better		
2	Sensitivity	6.3 dB μ V / -100 dBm or better		
3	Diversity System	True Diversity / Microprocessor-controlled diversity		
4	Modulation	Wideband FM		
5	Audio bandwidth	40 – 18 000 Hz or better		
6	T.H.D.	0.3 % or better		

7	SNR	100 dB or better		
8	Audio outputs	1 x XLR sockets balanced, 1 x TS ¼" / 6.3 mm jack sockets unbalanced		
	Transmitter (Battery Operated , AA Type)			
9	Switching bandwidth	≤ 30 MHz		
10	RF output power	10 to 50 mW		
11	Modulation	Wideband FM		
12	Audio input	TB3M / 3-pin mini-XLR socket or Compatible with Transmitter		
13	Audio bandwidth	40 – 18 000 Hz or better		
14	T.H.D.	0.7 % or better		
15	SNR	100 dB or better		
16	Lapel Mic	Cardioid Polar pattern with frequency Response 180 Hz - 15KHz		

24. SITC OF LAPEL MICROPHONE

1	Transducer Principle	Pre-polarized condenser		
2	Frequency Range	40–18,000 Hz or better		
3	Polar Pattern	Uni-directional		
4	Sensitivity	Sensitivity at 1,000 Hz: 7 mV/Pa		
5	Sound Pressure Level for 1% THD	110 dB or better		
6	S/N Ratio	60 dB or better		
7	Phantom Power	9-52 Volt Phantom Power		
8	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

25. SITC OF WIRELESS HANDHELD MICROPHONE

	Receiver			
1	Switching bandwidth	≤30 MHz		
2	Sensitivity	6.3 dBμV / -100 dBm or better		
3	Diversity System	True Diversity / Microprocessor-controlled diversity		
4	Modulation	Wideband FM		
5	Audio bandwidth	40 – 18 000 Hz or better		
6	T.H.D.	0.3 % or better		
7	SNR	100 dB or better		
8	Audio outputs	1 x XLR sockets balanced, 1 x TS ¼" / 6.3 mm jack sockets unbalanced		

	Transmitter (Battery Operated, AA Type)			
9	Microphone capsules	Dynamic (super cardiod)		
10	Switching bandwidth	≤30 MHz		
11	RF output power	10 to 50 mW		
12	Audio bandwidth	40 – 18 000 Hz or better		
13	Modulation	Wideband FM		
14	Max. SPL	120 dB or better		
15	T.H.D.	0.7 % or better		
16	SNR	120 dB or better		
17	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
26. SITC OF EAR PIECE FOR ANCHOR				
1	Type	Anchor Ear Piece with acoustic Tube with 125Ω, 5' (1.5M) cord, and ¼" plug.		
2	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
27. SITC OF WIRELESS LAPEL MICROPHONE FOR OUTDOOR WITH CAMERA MOUNTABLE RECIEVER				
1	System Package	Camera Mount Receiver, XLR output Cable, Body pack Transmitter with Lavalier Microphone (uni-directional)		
2	Antenna	High-Gain Antenna		
	Receiver			
3	Frequency Response	50Hz – 15kHz or Better		
6	Modulation	FM / Wideband FM		
7	Oscillator	PLL Synthesized		
8	Power	Powered by 2 "AA" Batteries		
	Transmitter			
9	Frequency Response	50Hz – 15kHz		
10	RF Power	25mW or better		
11	Oscillator	PLL Synthesized or Receiver Principle - Adaptive diversity		
12	Power	Powered by 2 "AA" Batteries		

13	Microphone	Lapel microphone (Unidirectional)		
14	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

28. SITC OF SHOTGUN MICROPHONE

1	System	Directional shotgun microphone		
2	Directional Pattern	Cardioid / Super cardioid		
3	Maximum SPL	120 dB or more		
4	Sensitivity	-36dB or better		
5	Phantom Power	Should work on Phantom power / batteries		
6	Frequency Range	80Hz to 18kHz or Better		
7	Output Connection	3-pin XLR, balanced		

29. SITC OF PROFESSIONAL HEADPHONE

1	Headphone type	Closed-back		
2	Wearing Style	On-ear		
3	Audio frequency bandwidth	20 - 20000 Hz or Better		
4	Sensitivity headphones	100 dB SPL or Better		
5	Rated Impedance	55 Ohms or Better		
6	Max Power	500mW or better		
6	Audio Interface	Type Stereo plug: 3.5mm (1/8") with 6.3 mm (1/4") screw-on adapter		
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

30. SITC OF AUDIO EMBEDDER

1	Type	SDI and 2-CH Audio Embedder		
2	Input	1x 3G-SDI BNC or better		
3	Output	1x 3G-SDI BNC or better		
4	Audio Inputs	RCA / Mini-XLR /XLR inputs		
5	Output	Two or more SDI outputs with embedded Audio		
6	Firmware Upgradation	Feature Required		
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

31. SITC OF SDI DISTRIBUTION AMPLIFIER				
1	Input	2 x 3G/HD/SD-SDI inputs		
2	Output	6 x 3G/HD/SD-SDI distribution outputs with re-clock		
3	Audio	Should support embedded Audio SDI		
4	Input Control	Two input video sources should be controlled by A/B switch or GPI remote (non-locked)		
	Supported video formats:			
5	3G-SDI	1080P 50/59.94/60		
6	HD-SDI	1080P 23.98/24/25/30 1080i 50/59.4/60 720P 50/59.94/60		
7	SD-SDI	525i /625i		
8	Firmware Up-gradation	Feature Required		
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
32. SITC OF SDI TO HDMI CONVERTER				
1	Input	1 x SDI, 1 x unbalanced audio		
2	Output	1 x HDMI, 1 x SDI (loop through)		
3	Output Resolutions	Video output format is the same as the input format		
4	Equalizer	Should be supported		
5	Reclock	Should be supported		
6	Firmware Upgradation	Feature Required		
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
33. SITC OF SDI AND HDMI TO USB CONVERTER FOR ONLINE VC MEETING				
1	Type	SDI + HDMI -USB Capturing device		
2	Compatibility	Should be compatible with various operating systems		
3	Compatibility	Amcap, Google Plus Hangouts, OBS (Open Broadcast Software), Skype, VLC, Xsplit Broadcaster, Zoom.us Linux: VLC, OBS		

		Mac OS X: OBS, Quick-time player, VLC, Face-time		
4	Input	1x HD/3G-SDI, HDMI Audio Input SDI Embedded Audio & 3.5 mm stereo in		
5	Output	1x USB 3.0 1x SDI Loop out		
6	Supported Input & Output Video Formats	1920 x 1080p 60/59.94/50/30/29.97/25/24/23.976 1920 x 1080i 60/59.94/50 (de-interlaced out) 1280 x 720p 60/59.94/50		
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
34. SITC OF UP/DOWN/CROSS CONVERTER				
1	Type	Up/Down/Cross Conversion		
2	Input	VGA x 1, HDMI x 1 , HD/SD-SDI x 1 or better		
3	Output	SDI x 2, HDMI x 1, SDI Loop thru BNC or better		
4	Supported video output formats:	1080p60/59.94/50, 1080p30/29.97/25/24/23.98, 1080i60/59.94/50, 720p60/59.94/50, 525i, 625i		
5	Audio Format (Input):	Analog Audio L/R : stereo audio SDI / HDMI embedded audio		
6	Audio Format (Output):	SDI embedded audio up to 8CH, 48KHz, PCM audio HDMI embedded audio up to 8CH, 48KHz, PCM audio		
7	Firmware Up-gradation	Feature Required		
8	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
35. SITC OF 100 WATTS LED COOL LIGHTS FOR STUDIO				
1	Type	100W LED Bi- colour light having temperature range from 3000K-		

		6000K complete with 4 leaf barn door, diffusers, normal operated yoke provided		
2	Lamp power	100W or better		
3	Color Temperature	3000K-6000K		
4	Dimming	0-100% Linearly adjustable through manual and DMX		
5	CRI	CRI:> 95 or better		
6	Beam Angle	110 deg		
7	Operating Temperature	-30°C to +55°C		
8	Light Body	Die Cast Aluminum		
9	Cooling System	Fan-Less no noise		
10	Protection Rating:	IP 20		
11	Mounting Accessory	Die cast aluminum "C" clamps and Safety bond 1.5Mtr long with lock clip		
12	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

36. SITC OF 200 WATTS LED FRESNEL SPOT LIGHT FOR STUDIO

1	Type	200 W LED light(noiseless) with color temperature 3200K-5600K panel complete with 4 -leaf barn door, normal operated yoke, Ceiling mounted, integrated dimmer enabled instant dimming from 0 to 100%. Color conversion filter from Daylight to Tungsten		
2	Lamp power	200W or better		
3	Color Temperature	3200K - 5600K		
4	Dimming	0-100% through manual and DMX		
5	CRI	CRI:> 90 or better		
6	Beam Angle	10 -50 deg or 30- 60deg		
7	Operating Temperature	-30°C to +55°C		
8	Protection Rating:	IP 20		
9	Mounting Accessory	Die cast aluminum "C" clamps and Safety bond 1.5Mtr long with lock clip		
10	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

37. SITC OF DIMMER CONTROL

1	Type	Professional 24-Channel or better DMX Lighting Console		
2	Feature Support	24 preset channels, assignable to 512 DMX channels		
3	Feature Support	Dimmer control via DMX or analog output		
4	Feature Support	Illuminated display/controls and Lamp socket for easy operation in dark stage environments		
5	Accessories	1x8 DMX Distribution unit		
6	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		
38. FIELD LIGHT KIT (SET OF THREE)				
1	Type	LED Kit for outdoor Broadcast applications- consisting of		
2		One no of 70W CCT Light having color temperature range from 2700K-5700K. With on light manual dimming, DMX dimming through 5-pin XLR connectors, 4-leaf barn door, and diffuser. CRI and TLCI should be above 96+		
3		Two nos. of 30W CCT Light having color temperature range from 2700K-5700K. With on light manual dimming, DMX dimming through 5-pin XLR connectors, 4-leaf barn door, and diffuser. CRI and TLCI should be above 96+		
4		One high quality fabric carry kit case to hold lights, adapter & power cables		
5		3-section air cushioned stands with Carry case		
39. SITC OF ENTERPRISE NAS WITH 48 TB STORAGE				
1	Form Factor	3U 16-bay		
2	Onboard Host Ports	4 x 1Gb/s iSCSI ports, 2 x10Gig ports		
3	Number of Drives	Initially populated with 8 x 6TB Drives. Provision to Expand with Additional Drives in remaining Vacant Hard disk slots		

4	Drive Interface	6Gb/s SATA		
5	Disk Support	3.5" SATA 6Gb/s HDD, 6TB, 7200RPM		
6	File Level Protocol Support	CIFS/ SMB, AFP, NFS, FTP, WebDAV		
7	Block Level Protocol Support	FC, FCoE, iSCSI, SAS		
8	Object Protocol Support	RESTful API		
9	Cloud Gateway	Amazon S3, Microsoft Azure Cloud, Open Stack		
10	Feature Support	Should Support Expansion Enclosures for Future Expansion		
11	RAID levels supported	RAID 0,1,(1+0), 3, 5, 6, 10, 30, 50, 60		
12	Feature Support	Online expansion by Adding new drives, Copying and replacing drives with drives of larger capacity		
13	Feature Support	RAID migration Configurable stripe size and write policy per system		
14	Network Configuration	IPv6 support, Fixed or dynamic IP address, Dual Gigabit Ethernet with Jumbo Frame, Port trunking / NIC teaming/ Link aggregation (IEEE 802.3ad), DHCP client, MPIO, MC/S support		
15	Access Right Management	User account management, Group management, Folder management (Folder and subfolder access control)		
16	Feature Support	Folder quota, Comprehensive access control action items (All Controls, Read, Read & Run, Write, Modify, List), Support Windows Active Directory Authentication (Domain Users Login via CIFS/ SMB, AFP, FTP & file explorer), LDAP on Linux		
17	OS Support	Windows Server 2008 / 2008 R2 / 2012 / 2012 R2 (including Hyper-V), Windows 7 SP1 / Windows 8.1, RedHat Enterprise Linux, SUSE Linux Enterprise, Sun Solaris, Mac OS X, VMware, Citrix Xen Server		
18	Accessories	Should be supplied with 2 SFP+ Connectors to connect with Ethernet Switch on 10G network		
40. SITC OF 24 PORT ETHERNET SWITCH				

1	Type	24 Port Ethernet Switch		
2	Layer	Layer 2 Switch		
3	Network Media	22 x 10/100/1000 Mbps, 2 x 10G SFP+		
4	No of Ports	24 Port		
5	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system		

41. SITC OF WORKSTATION FOR VIDEO EDITING

1	Chip	10-core CPU with 8 performance cores and 2 efficiency cores 24-core GPU 16-core Neural Engine 400GB/s memory bandwidth		
2	Memory	32GB unified memory		
3	Storage	1 TB SSD With External 4TB Storage on thunderbolt		
4	Video Support	Simultaneously supports up to five displays: Support for up to four Pro Display XDRs (6K resolution at 60Hz and over a billion colors) over USB-C and one 4K display (4K resolution at 60Hz and over a billion colors) over HDMI Thunderbolt 4 digital video output supports Native Display Port output over USB-C Thunderbolt 2, DVI and VGA output supported using adapters (sold separately) HDMI display video output Support for one display with up to 4K resolution at 60Hz DVI output using HDMI to DVI Adapter (sold separately)		
5	Audio	Built-in speaker 3.5 mm headphone jack with advanced support for high-impedance headphones		

		HDMI port supports multi-channel audio output		
6	Connections & Expansions	Thunderbolt 4 (up to 40 Gbps) Display Port USB 4 (up to 40 Gbps) USB 3.1 Gen 2 (up to 10 Gbps) Two USB-A ports (up to 5 Gbps) HDMI port 10Gb Ethernet 3.5 mm headphone jack On front (M1 Max): Two USB-C ports (up to 10 Gbps) SDXC card slot (UHS-II)		
7	Communication	Wi-Fi 802.11ax Wi-Fi 6 wireless networking IEEE 802.11a/b/g/n/ac compatible Bluetooth Bluetooth 5.0 wireless technology Ethernet 10Gb Ethernet (Nbase-T Ethernet with support for 1GB, 2.5GB, 5GB and 10GB Ethernet using RJ-45 connector)		
8	Accessories	24 inch 4K Display Final Cut Pro Video Editing software License Keyboard and mouse		
42. SITC OF AMPLIFIED/POWERED SPEAKERS (PAIR)				
1	TRANSDUCERS	LF: 135 mm (5.25 in) low frequency loudspeaker or better HF: 19 mm (0.75 in) Polycarbonate dome tweeter or better		
2	FREQUENCY RANGE	80 Hz - 20 kHz or better		
3	AMPLIFIER POWER	35 Watts per channel or better		
4	Accessories	All necessary cables and accessories should be supplied for completeness of the system		

43. SITC OF ONLINE UPS SYSTEM				
1	UPS	10 KVA 1:1 (1 Phase In: 1 Phase Out) On-Line UPS System with 60 Minutes Backup		
2	Input Voltage	180 Volts Ac to 260 Volts Ac		
3	Input frequency	47 Hz to 53 Hz (generator compatible)		
4	Technology	IGBT High Frequency		
5	Output voltage	230 volts +/- 1%		
6	Output frequency	50 Hz +/- 0.01 %		
7	Total Harmonic distortion at output	< 2%		
8	DC Input voltage	180/192/220 volts 60 minutes back up at full load		
9	Battery isolation	DCCB		
10	Battery type	SMF/ VRLA		
11	Protections	I/P, O/P, Over charging and short circuit protections with audio alarm and bypass switch		
12	Output wave	Pure sine wave		
13	Inverter efficiency	➤ 90 %		
14	Batteries and Accessories	Suitable rated batteries to provide backup for 60 Min or more along with Battery Rack, interlink battery cables		
15	Accessories	All necessary cables and accessories should be supplied for completeness of the system		
44. SYSTEM INSTALLATION MATERIAL AND CHARGES				
1	Cabling	It is required to set-up the facility for HD/SD operations, therefore all the cabling should seamlessly support required operation of the Studio.		
2	Installation Material	All installation materials including, power cables, interconnection cables, connectors and other accessories (

		required for installation of the complete system shall be quoted		
3	System Completeness	Completeness of the system will be responsibility of the bidder Any hardware and/or software including passive and active devices required for completeness of the technical workflow shall be quoted. Bidder shall be responsible for technical and operational completeness of the entire system.		
4	Workflow Diagram	The bidder has to provide schematic diagram of the technical workflow to ensure the workability of the offered solution in all respects.		
5	Any Additional Items to Complete the workflow	Bidder must mention any additional items require to complete the workflow with proper justification.		

CHECK LIST

S No.	ITEM	COMPLIED (YES/NO)	PAGE NO IN THE BID DOCUMENT
1	Have you enclosed the company particulars in the prescribed format as per Annexure -III		
2	Have you prepared the bid in two separate parts – technical and commercial		
3	Have you submitted the Earnest Money Deposit (EMD)		
4	Have you clearly specified the make , model no. and the country of origin of the equipment quoted and enclosed the technical specification and product features		
5	Have you enclosed certificate from the Original Equipment Manufacturer (OEM) for offering key equipment in the bid to NISD and for supporting the equipment for a period of not less than 5 years including two years warranty from the date of commissioning/acceptance of the equipment.		
6	Have you enclosed the make and model No. of the equipment quoted as per Annexure-IV		
7	Have you enclosed Compliance Statement as per Annexure-V		
8	Have you enclosed declaration as per Annexure-VII		
9	Have you provided the information required as per DPIIT Public Procurement (Preference to Make in India) order 2017 dt 16.09.2020		
10	Have you provided the certificate(s) required as per "Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) 2017"		
11	The offer should be valid for a minimum period of 6 months from the date of opening of the tender		

DECLARATION

1. I, Son / Daughter of Shri Proprietor / Partner / Director / Authorised Signatory of is / am competent to sign this declaration and execute this tender document.
2. I have carefully read and understood all the terms and conditions of the tender and hereby convey my acceptance of the same.
3. The information / documents furnished in the above application alongwith technical bid (technical specification / Bill of Material) are true and authentic to the best of my knowledge and belief. I / we, am / are well aware of the fact that furnishing of any false information / fabricated document would lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate law.
4. I declare that my company / firm / agency is OEM authorized service Agency. {Authorized channel service agency must enclose valid authorization certificate from OEM for back-end arrangement of SITC for supply of equipment}.

Signature of Authorized Person

Date:

Full Name:

Place:

Company's Seal:

Note: The above declaration, duly signed and sealed by the authorized signatory of the company, should be enclosed with Technical Bid.

Financial Bid Format**A. Equipment**

Sl. No.	Item	Unit Cost	Taxes	Total unit Cost	Qty.	Total Cost
1.	SITC OF BROADCAST QUALITY 4K CAMCORDER FOR OUTDOOR AND INDOOR SHOOT				1	
2.	SITC OF BROADCAST QUALITY PTZ CAMERA				4	
3.	SITC OF REMOTE CONTORL PANEL FOR PTZ CAMERA				1	
4.	SITC OF TRIPODS WITH DOLLY FOR CAMERA LOAD				3	
5.	SITC OF TRIPOD WITH DOLLY FOR CAMERA AND TP LOAD				1	
6.	SITC OF TELEPROMPTER SYSTEM				1	
7.	LAPTOP COMPUTER/LAPTOP SYSTEMS FOR TELEPROMPTER				1	
8.	SITC OF DIGITAL VIDEO PRODUCTION SWITCHER FOR TV STUDIO				1	
9.	SITC OF TRACKLESS VIRTUAL STUDIO SYSTEM				1	
10.	SITC OF LED SMART DISPLAY PANEL FOR PCR MULTIVIEW				1	
11.	SITC OF SMART LED DISPLAY PANEL FOR STUDIO FOLDBACK				2	
12.	SITC OF 4K (UHD) INTERACTIVE DISPLAY PANEL				1	
13.	SITC OF FIELD MONITOR AND RECORDER (SSD)				1	
14.	SITC OF AUDIO DELAY UNIT				1	
15.	SITC OF VIDEO STREAMING ENCODER				1	
16.	SITC OF VIDEO RECORDER AND PLAYER				1	
17.	PROFESSIONAL SSD BASED DIGITAL VIDEO RECORDER & PLAYER WITH INBUILT DISPLAY				1	
18.	SITC OF 16 CHANNEL ANALOG AUDIO MIXER CONSOLE				1	
19.	SITC OF AMPLIFIED/POWERED SPEAKERS (PAIR)				2	
20.	SITC OF DIGITAL SIGNAL PROCESSOR				1	
21.	SITC OF AUDIO AMPLIFIER				1	

22.	SITC OF TWO WAY LOUD SPEAKERS				4	
23.	SITC OF WIRELESS LAPEL MICROPHONE				3	
24.	SITC OF LAPEL MICROPHONE				2	
25.	SITC OF WIRELESS HANDHELD MICROPHONE				2	
26.	SITC OF EAR PIECE FOR ANCHOR				2	
27.	SITC OF WIRELESS LAPEL MICROPHONE FOR OUTDOOR WITH CAMERA MOUNTABLE RECIEVER				1	
28.	SITC OF SHOTGUN MICROPHONE				1	
29.	SITC OF PROFESSIONAL HEADPHONE				3	
30.	SITC OF AUDIO EMBEDDER				2	
31.	SITC OF SDI DISTRIBUTION AMPLIFIER				2	
32.	SITC OF SDI TO HDMI CONVERTER				4	
33.	SITC OF SDI AND HDMI TO USB CONVERTER FOR ONLINE VC MEETING				1	
34.	SITC OF UP/DOWN/CROSS CONVERTER				4	
35.	SITC OF 100 WATTS LED COOL LIGHTS FOR STUDIO				14	
36.	SITC OF 200 WATTS LED FRESNEL SPOT LIGHT FOR STUDIO				4	
37.	SITC OF DIMMER CONTROL				1	
38.	FIELD LIGHT KIT (SET OF THREE)				1	
39.	SITC OF ENTERPRISE NAS WITH 48 TB STORAGE				1	
40.	SITC OF 24 PORT ETHERNET SWITCH				1	
41.	SITC OF WORKSTATION FOR VIDEO EDITING				1	
42.	SITC OF AMPLIFIED/POWERED SPEAKERS (PAIR)				1	
43.	SITC OF ONLINE UPS SYSTEM				1	
44.	SYSTEM INSTALLATION MATERIAL AND CHARGES				1	

B. ACOUSTICS WORK FOR NISD, STUDIO WITH MATERIAL AND LABOUR

	<p>SITC OF STATE OF THE ART SEMI-CIVIL & ACOUSTICS WORKS/TREATMENT OF STUDIO :</p> <p>The vendor may visit "Present assigned rooms at NISD Building to physically ascertain customized requirements at site before quoting quantities and rates for various items under this head Studio Size Approx 27(L) x 21 (B) x 11 (H) Feet, Window Size Approx. 5 ft x 5.5 ft</p>					
	<p>The bidder should ensure that the noise level within the studio room is within 30 dB level. Bidders need to quote Unit rates so that actual cost can be calculated based on measurements.</p>					
	<p>Studio Wall 1 = LXH Studio Wall 2 = BXH Studio Wall 3 =LXH Studio Wall 4 = BXH</p>					
S.No.	ITEM	Cost per sq feet/ unit	Taxes	Total cost per sq feet/ unit	Area/ no of units	Total cost
1	Providing of Acoustic Treatment on the Studio Walls and Ceiling					
1.01	Rock Wool of 32 kg density to be filled between wall and 12 mm thick ply which will be finished with Laminate (inside of the studio) Covered with Virgin polythene and chicken mesh) should be used up to 3 feet from floor and to be filled between wall and 12 mm thick ply which will be finished with 1 mm laminate.				288 Sqft	
1.02	Above 3 feet - Rockwool of 48 kg density to be filled between Wall and the perforated Gypsum. Rockwool should be covered with virgin polythene.				768 Sqft	
1.03	Providing and Fixing of acoustics Grid Ceiling (600x600mm) with 15 mm grid system (NRC 0.7) and supports Ceiling shall also be acoustically treated with 50 mm thick layer of Rockwool of 40 kg density in a Grid of 2'x2' made up of wire mesh, which will be placed on the perforated Gypsum board, which will be further finished with the paint after jointing and taping				567 Sqft	

1.04	Providing and making Observation window in existing Brick wall. 4ft x 3ft Providing 8 mm thick Sandwich toughened Glass Observation Window minimum gap between two glasses will be 2" frame work between Studio and PCR.				12 Sqft	
1.05	Providing and fixing of acoustics 55 mm thick single leaf Door of size 7 x 3.5 ft with vision panel (Peeping window) of 12 inch x 12inch approx. and the door hardware including door closer, handle, lock and a door stopper Studio has 2 Entrance Doors				49 Sqft	
1.06	Studio Light Grid Providing and Installation of MS (Tube size 50 mm Dia) Studio Lighting grid of 4'x4' spacing and properly painted with two coats of primer and enamel paint with Proper power arrangement for Studio Lights and Cable trenches where ever is required for Studio Dimmer lights.				567 SqFt	
1.07	Providing and laying of 2mm thick PVC flooring in Studio area				567 SqFt	
1.08	Providing and Fixing of designer Anchor / Teacher Table of size of 9 ft length x 3 ft width x 2.5 ft height or better as per the set requirement with slight curves with laminate finish and proper edge binding in suitable ply				27 SqFt	
1.09	Studio Set with good quality and aesthetically good looking Back drop around the 65 " Interactive Screen. Interactive Screen shall be embedded in the Set. The set will be made of combination of commercial ply and MDF of suitable thickness for the set. The Set will also have a raised platform of 100 thickness in front of the set. Necessary arrangements will be made for colour changing LED light strips at various points of the set.				1	

1.10	Green Chroma Set 12 Feet wide, 10 Feet on Wall and at least 6 Feet on Floor with curved edge from Wall to floor. With Proper green fabric to provide rich Chroma key effect made up of ply and a carpet of green colour to be pasted on it.				192 SqFt	
1.11	Closing of all glass windows/partitions with 12 mm MDF painted black from one side and mounted in front of the glass with drywall partition channels				3	
1.12	Wooden Cable Tray - For laying of Cable between PCR and Studio. (Across the periphery of Studio and PCR)					
1.13	Dismantling of Existing False ceiling tiles and grid.					
2	SITC OF STATE OF THE ART SEMI-CIVIL & acoustics WORKS/TREATMENT OF PCR					
	PCR Size 13'(L)x 21' (B) x11' (H)					
	PCR Wall 1 = LXH PCR Wall 2 = BXH PCR Wall 3 = LXH PCR Wall 4 = BXH					
	Providing of acoustics Treatment on the Studio Walls and Ceiling					
2.01	Rock Wool of 32 kg density to be filled between wall and 12 mm thick ply which will be finished with Laminate (inside of the studio) Covered with Virgin polythene and chicken mesh) should be used up to 3 feet from floor and to be filled between wall and 12 mm thick ply which will be finished with 1 mm laminate.				204 SqFt	
2.02	Above 3 feet - Rockwool of 48 kg density to be filled between Wall and the perforated Gypsum as being proposed for acoustics Rockwool should be covered with virgin polythene.				544 SqFt	

2.03	Providing and Fixing of acoustic Grid Ceiling (600x600) with 15 mm grid system (NRC 0.7) and supports Ceiling shall also be acoustically treated with 50 mm thick layer of Rockwool of 40 kg density in a Grid of 2'x2' made up of wire mesh, which will be placed on the perforated Gypsum board, which will be further finished with the paint after jointing and taping				273 SqFt	
2.04	Providing and fixing of acoustics 55 mm thick single leaf Door of size 7 x 3.5 ft with vision panel (Peeping window) of 12 inch x 12inch approx and the door hardware including door closer, handle, lock and a door stopper				24.5 SqFt	
2.05	Providing and laying of 2mm thick PVC flooring				273 SqFt	
2.06	Providing and Fixing of Technical Table at PCR of size 15(L) X 3F(B) X 2.5(H) with Extended Slanted extention for Equipement placement above 2.5feet of approx 900mm with laminate finish and suitable suitable ply. It should also have a provision for cable laying trench, power distribution units for equipment to be placed on technical table.				45 SqFt	
2.07	Providing and Fixing of Cabinets 7ft x 3 ft & 450mm depth (approx), made up of commercial board with Shutters in Prelam MDF				21 SqFt	
2.08	Closing of all glass windows/partitions with 12 mm MDF painted black from one side and mounted in front of the glass with drywall partition channels				1	
2.09	Wooden Cable Tray - For laying of Cable between PCR and Studio.				1	
3	EDIT ROOM					

3.01	<p>Providing and Fixing of Technical Table at EDIT area of size 15(L) X 2.5 F(B) X 2.5(H) with laminate finish and proper edge binding in suitable ply.</p> <p>It should also have a provision for cable laying trench, power distribution units for equipment to be placed on technical table.</p>				37.5 SqFt	
4	<p>SOUNDLOCK AND PASSAGE WORKS</p> <p>Bidder has to make a sound lock area of approx size 4 ft x 5ft at the entrance of Studio</p>					
4.01	<p>Sound lock area to be made inside the studio and should be treated with acoustics works. Partition wall to be made of size 4 ft x 5 ft</p>					
4.02	<p>Rock Wool of 32 kg density to be filled between wall and 12 mm thick ply which will be finished with Laminate (inside of the studio)</p> <p>Covered with Virgin polythene and chicken mesh) should be used</p> <p>Up to 3 feet from floor and to be filled between wall and 12 mm thick ply which will be finished with 1 mm laminate.</p>				27 SqFt	
4.03	<p>Above 3 feet - Rockwool of 48 kg density to be filled between Wall and the perforated Gypsum as being proposed for acoustics</p> <p>Rockwool should be covered with virgin polythene.</p>				81 SqFt	
4.04	<p>Providing and Fixing of acoustic Grid Ceiling (600x600) with 15 mm grid system (NRC 0.7) and supports</p> <p>Ceiling shall also be acoustically treated with 50 mm thick layer of Rockwool of 40 kg density in a Grid of 2'x2' made up of wire mesh, which will be placed on the perforated Gypsum board, which will be further finished with the paint after jointing and taping</p>				20 SqFt	

4.05	Providing and fixing of acoustics 55 mm thick single leaf Door of size 7 x 3.5 ft with vision panel (Peeping window) of 12 inch x 12inch approx and the door hardware including door closer, handle, lock and a door stopper				24.5 SqFt	
5	ELECTRICAL WORK					
5.01	The electrical points should be sufficient for lights and equipment and should be of standard makes modular switches and sockets, with short circuit and overload protection. Studio, Sound lock and PCR Should be equipped with 2x2 LED Panel Lights in Sufficient quantity to illuminate the operational area With separate switches. The bidder should use good quality copper wires and PVC tray etc to carry wires and cables etc.				1	
	TOTAL					

A. Installation Charges

B. Training Charges

C. CAMC (Comprehensive Annual Maintenance charges) as % of equipment cost
(Please specify the % as well as the charges)

D. Any other Item/charges

Total Cost

Sl. No.	Item	Cost
A.	Equipment cost	
B.	Acoustic work	
C.	Installation Charges	
D.	Training Charges	
E.	Comprehensive Annual Maintenance charges for three years	
F.	Any other charges	
	Grand Total	

(Please specify the cost in words and figures)