HSCC/SES/PTTS/AIIMS-TRAUMA/2015 Dated: 11.05.2016

All Bidders

Amendment -V

Subject: Supply, Installation, Testing & Commissioning of Pneumatic Tube Transport System for Jai Prakash Narayan AIIMS Trauma Centre, New Delhi.

IFB No. : HSCC/SES/PTTS/AIIMS-TRAUMA/2015

This has reference to above IFB No. for the Subject works.

The following Amendment may be noted which shall be treated as part of the tender document and to be submitted duly signed & stamp along with tender.

PTTS AIIMS TRAUMA BIDDERS QUERY

Sr. No.	Bidder's Query	Clarification/Amendment
1.	NIT Point No. 2 of Specifications:- The Tender document states that "The equipment supplied should confirm with all relevant standards and regulations in force, and should, be in accordance with Health Technical Memorandum 2009. The equipment should carry the CE mark and should be supplied with relevant Declarations of Conformity to certify compliance with the EMC directive 89/336/EEC-92/31/EEC and the Machinery Safety Directive 89/392/EEC-91/368/EEC-93/44/EEC. We would like to submit that Pneumatic Tube System does not fall under the Health Technical Memorandum 2009, therefore this requirement may please be deleted and relevant necessary amendment be issued. Further referred EMC Directives are NOT CORRECT and not pertaining to Pneumatic Tube Systems, rather the following Correct EMC & EN Directives apply: For Power Packs: Low Voltage Directive 2006/95/EC EN 61558 Part 1 with part 2-6 and For Stations and Diverters: Machinery EC Directive 2006/42/EC (Annex IIB) and Annex 1EMC Directive 2004/108/EC applies.	Low Voltage Directive 2006/95/EC EN 61558 Part 1 with part 2-6 and For Stations and Diverters: Machinery EC Directive 2006/42/EC (Annex IIB) and Annex 1EMC Directive 2004/108/EC **shall be applicable instead of** EMC directive 89/336/EEC-92/31/EEC and the Machinery Safety Directive 89/392/EEC-91/368/EEC-93/44/EEC.

2	NIT Point No.3 of Specifications PERFORMANCE In the tender document it is stated that the system should be capable of loads of upto 7kgs at a speed of 3-6 m/s, whereas the standard is 3-5 kgs hence this needs to be corrected and blower specifications need to be included at the speeds at the speeds and payloads are dependent on the blower ratings.	Blower shall be of 2.6 Kw set to operate from 50 Hz upto 75 Hz for the load of 3-5 Kgs.
3	NIT Point No.5 of Specifications The tender document states that " The system should have following features: Main Control Unit Hardware for main controller, for minimum of 20 bus systems, for systems up from 100 devices and transfer zone. Main Control Unit Hardware- Router for " Main Control" with multiple ports for connection of several Main Control Units. Patchable for connection router to Main Control" We would like to submit herewith that since as per laid out specifications in the tender, the offers system can also be "COMPUTER" controlled, therefore, the above requirements may be amended to as optional in case of the Microprocessor system, as these are not applicable if the system is with "COMPUTER" controlled . Kindly have the same amended.	Computer controlled
4	**NIT Point No 13 & 15** The tender document states as per Point No. 13 that and Interchange should be there and "INTERCHANGE" specifications are laid out which are more generic and is acceptable allowing all intending contenders to offer their own specific interchange solutions. However again at Point No. 15 a "Linear Coupler" which is a specific brand and make of a particular manufacturer with their own designs for the interchange has been mentioned with specific detailed biased specifications preventing other companies to bid for. Therefore the entire point No. 15 must be deleted.	Deleted
5	**The Bill of Quantities (BOQs)** As stated in the tender document, do not match the requirements stated out in the tender document, these need to be corrected as well.	Revised BOQ is enclosed
6.	**Bill of Quantities**	
	As stated in the Bill of Quantities, the BRANDS/NAMES of	

	the Stations & Software and certain components are specifically mentioned that belong to one specific brand and make only i.e. **BP-Atlas Software** **Saturn Station** **ZOS (Lab Receiving Station)** **MSV &+ Card PMSV** **Elbow for MSV** **6- Way Diverter + PWZA NW160** Which are also misleading in nomenclature with only abbreviations as these do not indicate what particular component it and also furthers indicates that a specific make and brand is being favoured and the entire idea of an open tender is defeated here as only one specific manufacturer can only quote these makes and brands and prevents company's such as ours with the largest installation based world-wide and in India to participate.	Read Software instead of BP-Atlas Software Read Station instead of Saturn Station Read Lab Receiving Station instead of ZOS (Lab Receiving Station) Deleted (MSV &+ Card PMSV Elbow for MSV 6- Way Diverter + PWZA NW160) Read 3 Way diverter instead of 3- Way Diverter + PWZA NW160
7	**(5.2) PREQUALIFICATION DOCUMENT)** As this is for AIIMS tender the terms & condition should be same as that of the AIIMS tender. In recent tenders of AIIMS, It is mentioned that the firm should not stand deregistered / banned / blacklisted by any government authorities/organisation. We are enclosing the copies of AIIMS orthopaedic tender same clause are mentioned in the HLL, CPWD, PWD, Railway, Central Government tender etc. Copy of some tenders are attached for your kind reference. **We would request you to change this clause "that firm should not stand blacklisted / debarred by any government authorities / organisation on the date of submission of tender".**	Tender terms and conditions prevail.
8	**Volume -1, (Point-6.0), Page – 7, PREQUALIFICATION DOCUMENT)** Even though the Applicants meet the above criteria, they are subject to be disqualified, if they have: - made misleading or false representation in the form, statement and attachments submitted; /or. - record of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures, etc. /or - The performance of any agency already worked/ working with	Tender terms and conditions prevail.

	HSCC is not found satisfactory/or - found to have been black listed in any of the works. **It should be change to the "Company should not stand blacklisted/debarred by any government authorities/organisation on the date of submission of tender". (APPLICATION FORM NO.- 02, POINT - 09) PREQUALIFICATION DOCUMENT)** Has the applicant ever been debarred / black listed for tendering in any organisation at any time? If so, give details. **Should be change to if the applicant stand debarred/blacklisted in any organisation give details.** **Please Note: -** **As discussed in the meeting Buyback of old system should be asked and be replaced with new system for the Old and New Blocks.** **As this is tender for turnkey items and require extensive working. So please give us 5-6 week for tender submission from the date of issue of corrigendum.**	

Tender S. No.	Tender Specification	COMPLIANCE/ SUGGESTED CHANGES	Remarks
9	PC controlled and should be provided with the most modern control circuits and software. Designed for the Windows plat-form: Windows 95, Windows 98, Windows 2000, Windows XP, Windows Vista and Windows 7.	PC controlled and should be provided with the most modern control circuits and software. Designed for the Windows**/Linux** plat-form: Windows 95, Windows 98, Windows 2000, Windows XP, Windows Vista and Windows 7. Linux based systems are not prone to crashes & virus attacks as the Windows based systems.	Tender terms prevail
10	The software should also have a comprehensive priority setting, by which the system should be fine tuned for an optimum result. Priority levels should be chosen from -100 up to +100 for each station or coupler.	The software should also have a comprehensive priority setting, by which the system should be fine tuned for an optimum result. Priority levels should be chosen from -100 up to +100 for each station or coupler Transfer Zone.	The software should also have a comprehensive priority setting, by which the system should be fine tuned for an optimum result. Priority levels should be chosen from -100 up to +100 for each station or Transfer zone.

11	Line interfaces should be connected to the PC with an ether net switch (or more if needed). CAT-5E UTP cables should be used to connect the switch, the PC network card and the interfaces (plug RJ45). System cable should be with 6 wires, 1 earth wire, 1 pair for data, 1 pair for power (42VDC) and a mass-reference wire.	Every OEM has its own system of connecting the Central Control Unit and PC/ Computer with different power ratings etc. Hence, this specification should be deleted	.Deleted
12.	**STATIONS** Stations 160 mm should be of a front loading design and should be manufactured from hygienic closed cell materials.	Stations 160 mm should be of a front loading design and should be manufactured from hygienic closed cell **(Stainless Steel)** material. Stainless Steel is the best material to make the station body most hygienic in a hospital environment. This also makes sure that the stations do not catch fire and emmit toxic gases, in an eventuality of fire.	Stainless Steel SS-304 material.
13	The keypad should of the wipe able membrane type or medical grade touch screen.	The keypad should of the wipe able membrane type **&** medical grade touch screen in **select important locations (refer BOQ)** There is a lot of cost difference between a membrane type and touch screen keypad. Therefore, it is important to define which locations to have touch screen keypad and which location to membrane keypad.	Contractor shall prepare the shop drawing showing all details of installation and submit Engineer Incharge for approval before execution of works
14	Carriers should be loaded through acrylic door on the front of the station. The front loading design should allow the station to be mounted at a convenient height for all, including wheelchair users. It should also allow the station to be built in flush if required.	Carriers should not be loaded through acrylic door on the front of the station. The front loading design should allow the station to be mounted at a convenient height for all, including wheelchair users. It should also allow the station to be built in flush if required. Having an Acrylic Door is not advisable. Once the carrier is loaded, it should still be accessible incase it has to be removed before it leaves. Flushed stations and normal stations have a different body styling and hence substantial cost difference. So it is important to know, the nos. of	Acrylic door deleted. Layout with number stations is attached.

		stations with the flushed styling.	
15	Destinations should be addressed by the use of a three digit number or by accessing the station name through the directory.	Destinations should not be addressed by the use of a three atleast a 4 digit number (with the option of going upto 10 digit nos.) or by accessing the station name through the directory. Three digits is usually less for a big hospital. Usually Hospitals designate 4 digits as per the room and intercom nos. alotted. Why to be retricted at 3 digits only?	4 digit nos
16.	**BLOWER:** Blowers of suitable capacity with suitable mbar pressure, with low noise, unidirectional rotation with electronic air switch to switch between compressed air and vacuum. Each blower should be provided with Frequency Converter for Control of slow speed for sensitive laboratory samples by frequency control of Compressor. The blower should be set go up with the help of Frequency Converter. Frequency converter should help the system to run on blowers. It should be provided with all the mounting accessories and sound proof enclosure.	**BLOWER:** Blowers of 2.6 Kw not suitable capacity with suitable mbar pressure, with low noise, unidirectional rotation with electronic air switch to switch between compressed air and vacuum. Each blower should be provided with Frequency Converter which should allow the Blower to go upto 75 Hz for Control of slow speed for sensitive laboratory samples by frequency control of Compressor. The blower should be set go up with the help of Frequency Converter. Frequency converter should help the system to run on blowers. It should be provided with all the mounting accessories and sound proof enclosure. It is important to specify the wattage of the blower. There are so many different sizes/ capacities. 2.6 Kw Blower set to opeate from 50 Hz upto 75 Hz is the most suitable, since it protects the quality of the samples also.	Blowers of 2.6 Kw set to operate from 50 Hz upto 75 Hz
17.	**SECURITY** Carriers should be secured during both the send and receive operations. Carriers to be sent should be loaded behind the guard door which should be locked on transaction, It should also be ensured that a carrier waiting to be sent should not be accessible. Carriers should be received into a secure receiving cabinet accessible only by key lock or digital PIN code. In addition, arrival signal units shall be programmed to discriminate to different user	**SECURITY** Carriers should be secured during both the send and receive operations. It should not be as Carriers to be sent should be loaded behind the guard door which should be locked on transaction, It should also be ensured that a carrier waiting to be sent should not be accessible. Carriers should be received into a secure receiving cabinet accessible	Having access to the carrier before leaving is important to avoid restriction of user instead of "Carriers to be sent should be loaded behind

	addresses, thereby allowing urgent full carriers to be immediately notified to the user, whilst allowing no alarm for empty returns. The use of different addresses allows different priorities to be given to different carriers, thereby reducing waiting times for sensitive items. The use of the station should be restricted by a user identifiable touch key. The feature should allow only authorised users access to the system, and records each individual user by name.	only by key lock or digital PIN code. In addition, arrival signal units shall be programmed to discriminate to different user addresses, thereby allowing urgent full carriers to be immediately notified to the user, whilst allowing no alarm for empty returns. The use of different addresses allows different priorities to be given to different carriers, thereby reducing waiting times for sensitive items. The use of the station should be restricted by a user identifiable touch key. The feature should allow only authorised users access to the system, and records each individual user by name. Having access to the carrier before leaving is important. Otherwise it restricts the users if they want to remove the carrier due to any changes required in the carrier content. All the users will be authorised and trained personnel and such restrictions have no meaning.	the guard door which should be locked on transaction, It should also be ensured that a carrier waiting to be sent should not be accessible.”
18	**CARRIERS** Carriers should be of the "swivel top" design, with coloured ends, and transparent body. This type of carrier must be closed before the system should accept it, and should not come open during transit. Carriers should be available in both long and short sizes.	**CARRIERS** Carriers should be of the "swivel top" design, with coloured ends, and transparent body. This type of carrier must be closed before the system should accept it, and should not come open during transit. Carriers should be available in both long and short sizes (Sizes: 330 x 115 mm & 400 x 115 mm) and should be able to move in bends with 800 mm bend radius only. It is important to specify the sizes.	Sizes: 330 x 115 mm & 400 x 115 mm
19	**TUBING** The installation should be carried out using specially manufactured rigid uPVC tubing to DIN 8061/62. All joints should be solvent welded. The integrity of the fire rating should not be reduced, where tubing passing through a wall or floor. Intumescent (crushing) type fire sleeves should be installed at all such points. The exact routes and positioning of tube work and associated equipment should be agreed with the engineer prior to work commencing. The uPVC tubing should be adequately supported with suitable clamps and zinc plated rods attached to suitable fixing anchors. Unistrut should also be used where required to support groups of tubing.	**TUBING** The installation should be carried out using specially manufactured rigid uPVC tubing to DIN 8061/62. All joints should be solvent welded. The integrity of the fire rating should not be reduced, where tubing passing through a wall or floor. Intumescent (crushing) type fire sleeves should be installed at all such points. The exact routes and positioning of tube work and associated equipment should be agreed with the engineer prior to work commencing. The uPVC tubing should be adequately	Bends: Should be of 800 mm radius

		supported with suitable clamps and zinc plated rods attached to suitable fixing anchors. Unistrut should also be used where required to support groups of tubing. Bends: Should be of 800 mm radius Bends of radius 800 mm will take smaller space thereby giving better access to other services.	
20	**DIVERTERS** The location and siting of diverters should be agreed with the engineer prior to installation. Diverters should be mounted using suitable fixings. The installation should be carried out using either 3 or 6 way diverters so as to allow for the future expansion of the system.	**DIVERTERS** The location and siting of diverters should be agreed with the engineer prior to installation. Diverters should be mounted using suitable fixings. The installation should be carried out using 3 way diverters so as to allow for the future expansion of the system. 6 way diverters are very big size and fitting them into the ceilings with false ceilings and other running services will make it almost impossible to install. Because of this reason most of the companies use 3 way diverters. You are requested to provide us either the stations location or schematic layout as every company has an individual designing methodology.	3 way Diverters
21	**EXHAUSTERS** Suitable exhausters should be supplied, one per system. The exhausters should be mounted on anti-vibration mountings. The capacity of the exhauster should be suitable to ensure that the required performance is maintained throughout the system. Data should be supplied to show this on request.	Not Understood Kindly give details of this component, it is not clearly understood.	Deleted
22	**LINEAR COUPLER** This unit should be used for high frequencies and large numbers of stations, where often the system has to be split into separate but fully coupled lines. For traffic between lines the coupler should act as a mechanical transfer unit, the carrier shall be in transit in each line simultaneously and carriers shall be sent from line to line. In case the chosen line is busy the unit should function as temporary storage and avoid waiting times for users. The coupler should take waiting carriers from the line and places them in a storage area, with 3 storage positions per line. This way carriers should not pile up in the line so the line stays available, minimizing transport times. Should have separation of sent and receive lines and the horizontal transfer in the coupler unit. All	As per the BOQ, the system is with only 2 Zones. For such a small system Linear Coupler kind of mechanism is not required. Further, Linear Coupler is a name of a specific brand of PTS company. S.No. 14 suffices the details of the Interchange System.	Deleted

	functions such as send, receive, transfer, storage and positioning should be multi-tasking. If the slow speed and/or priority sending function is activated, this function should also be automatically used throughout the coupler unit. This ensures a slow and/or priority sending of e.g. blood samples is used during the complete transfer. The coupler should be designed for very intensive use and has a very long life cycle. The unit should be made of aluminum profiles and synthetic material. The linear coupler should meets the European CE standard for mechanical engineering, the EMC standards for electronics and printed circuit boards and meets the IP40 standard. Transport should be shock proof and suitable for e.g. blood or other bio hazard sample transport. The coupler should use the main system cable as power supply. The linear coupler should be installed on the ground. It is preferable to situate the coupler, exhausters and diverters close to each other. The shorter the distance between transfer diverters and the coupler, the more capacity will be available. Should have following features : • _Maximizes system capacity: up to 500 carriers per hour de-pending on system configuration. • _Integrate all priority and slow speed transactions • _Smart multi storage system • _Silent and shockproof transport, suitable for blood transport and other bio hazard mate-rials • _Designed for intensive use _Low energy consumption • Meets the CE guideline 2006/42/EC for mechanical engineering and the EMC standard 2004/108/EG		

23	**IN ADDITION TO THE ABOVE, FOLLOWING TURNKEY WORKS FOR INSTALLATION AND COMMISSIONING OF PTS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR:** • Contractor shall dismantle the existing equipment, pipelines system inside the Plant room and install, test and commission of the newly supplied equipment and Pipeline system in the Plant room.	**IN ADDITION TO THE ABOVE, FOLLOWING TURNKEY WORKS FOR INSTALLATION AND COMMISSIONING OF PTS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR:** • Contractor shall dismantle the existing equipment, pipelines system inside the Plant room and install, test and commission of the newly supplied equipment and Pipeline system in the Plant room. Should be deleted	Tender Terms Prevails.

The bid submission date is extended from 12.05.2016 to 26.05.2016 and bid security should be valid for 180 days from the date of bid submission ie. from 26.05.2016.

Bidder should follow the tender terms & condition for the unanswered queries.

All other terms & conditions remain unchanged.

Chief General Manager
For & on behalf of Director (AIIMS)

JAI PRAKASH NARAYAN (JPN)
AIIMS TRAUMA CENTRE NEW
DELHI

e- TENDER

FOR

Supply, Installation, Testing & Commissioning of Pneumatic Tube Transport System for Jai Prakash Narayan AIIMS Trauma Centre, New Delhi

VOLUME –V

BILL OF QUANTITIES (BOQ)

February 2016

(Consultants & Engineers for Mega Hospitals & Laboratories)
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Tender No. HSCC/SES/PTTS/AIIMS-Trauma/2015

BILL OF QUANTITY

Package - Supply, installation, testing & commissioning of PNEUMATIC TUBE TRANSPORT SYSTEM and Defect Liability Period.

PART-III

Sl.No	Materials	Unit	Quantity	Rate in Fig in Rs.	Rate in words in Rupees	Total Amount in Rs.
	PC - CONTROLLER					
1	Personal Computer with Microsoft Windows	Nos	1			
2	Monitor TFT - minimum 19 inch	Nos	1			
3	UPS Power supply for PC, min 600W/750VA	Nos	1			
4	Software	Nos	1			
5	Software -(Analysis –Track & Trace)	Nos	1			
	STATIONS					
1	Station	Nos	17			
2	Lower tube end 160	Nos	4			
3	Upper tube end 160	Nos	2			
4	Receiving set 160	Nos	17			
5	Lab receiving station	Nos	1			
	CARRIERS					
1	Carrier 160 blue	Nos	64			
	DIVERTERS and POWER SUPPLY					

BILL OF QUANTITY

Package - Supply, installation, testing & commissioning of PNEUMATIC TUBE TRANSPORT SYSTEM and Defect Liability Period.

PART-III

Sl.No	Materials	Unit	Quantity	Rate in Fig in Rs.	Rate in words in Rupees	Total Amount in Rs.
1	3-way diverter 160	Nos	1			
	BLOWER UNITS / ACCESSOIRES					
1	Blower Unit	Nos	2			
2	Vibration absorber	Nos	8			
3	Contactor	Nos	2			
4	Thermo relay	Nos	2			
5	Anti interference set	Nos	4			
6	MSV and Card	Nos	2			
7	Silencer	Nos	4			
8	Elbow 90 for MSV	Nos	2			
9	Carrier brake device 160	Nos	2			
	TRANSPORT TUBE					
1	Tube 160 , standard delivery length 5m	mtr	1000			
2	Bend 160 R=800	mtr	75			
3	Sleeve 160	mtr	900			

BILL OF QUANTITY

Package - Supply, installation, testing & commissioning of PNEUMATIC TUBE TRANSPORT SYSTEM and Defect Liability Period.

PART-III

Sl.No	Materials	Unit	Quantity	Rate in Fig in Rs.	Rate in words in Rupees	Total Amount in Rs.
4	Clip steel NW 160	mtr	700			
5	Threaded rod M8	mtr	700			
6	Glue for PVC(Container)	Nos	10			
7	Solvent for PVC (Container)	Nos	8			
	CABLE					
1	MP-Cable + Earthwire	mtr	1000			
2	Tie wrap 110 grey - for 160 2x (100x)		4			
	AIR SERVICE TUBE					
1	Air tube 90- Standard delivery length 5m	Nos	1			
2	Air sleeve 90	Nos	5			
3	Elbow 90	Nos	2			
4	Clip steel M8 90	Nos	5			
5	Reduction ring 60-90	Nos	2			
6	Airtube 60	Nos	1			
7	**TURNKEY WORKS**	Lot	1			
Note	**Technical specification shall be followed for further details of the above items**				**TOTAL Rs.**	

BILL OF QUANTITY

	Package - Supply, installation, testing & commissioning of PNEUMATIC TUBE TRANSPORT SYSTEM and Defect Liability Period.					
	PART-III					
Sl.No	**Materials**	**Unit**	**Quantity**	**Rate in Fig in Rs.**	**Rate in words in Rupees**	**Total Amount in Rs.**
	PART-II					
Item No 1	**Description 2**	**Unit 3**	**Qty 4**	**Unit Rate In Rs (in Figure)**	**Unit Rate in words in Rupees 6**	**Amount (Rs.) (In Figure) 7**
1	**Operation Charges** for the complete Integrated Pneumatic tube system during one year Defect Liability Period as per the contract.		1			

BILL OF QUANTITY

Package - Supply, installation, testing & commissioning of PNEUMATIC TUBE TRANSPORT SYSTEM and Defect Liability Period.

PART-III

Sl.No	Materials	Unit	Quantity	Rate in Fig in Rs.	Rate in words in Rupees	Total Amount in Rs.
	PART-II					
Item No 1	**Description 2**	**Unit 3**	**Qty 4**	**Unit Rate In Rs (in Figure) 5**	**Unit Rate in words in Rupees 6**	**Amount (Rs.) (In Figure) 7**
1.	**Operation** for the complete Integrated Pneumatic tube system complete in all respect after completion of one year DLP as per the contract.					
	Ist Year	Job	1			
	2nd Year	Job	1			
	3rd Year	Job	1			
	4th Year	Job	1			
2.	**Comprehensive Maintenance Charges** for the complete Integrated Pneumatic tube system including spares, repair or replacement of defective equipments/parts, tolls, tackles, accessories, consumables, labour charges etc. complete in all respect after completion of one year DLP as per the contract.					
	Ist Year	J	1			
	2nd Year	J	1			
	3rd Year	J	1			
	4th Year	J	1			
	SUB TOTAL Rs.					

BILL OF QUANTITY

	SUMMARY OF RATES QUOTED					
	TOTAL (PART-I)					
	TOTAL (PART-II)					
	TOTAL (PART-III)					
	Grand Total Amount (PART - I + PART - II+ PART III) (in Figures) :-				**Rs.**	

BILL OF QUANTITY

	Package - Supply, installation, testing & commissioning of PNEUMATIC TUBE TRANSPORT SYSTEM and Defect Liability Period.					
	PART-III					
Sl.No	**Materials**	**Unit**	**Quantity**	**Rate in Fig in Rs.**	**Rate in words in Rupees**	**Total Amount in Rs.**
	Grand Total in words:					