Amendment No. 1 dated 01/08/2009

Sub: Amendment to the Bid Document

Ref.: Tender No. HLL/PCD/ESIC-06/09-10 dtd. 22/07/09

Following amendments are incorporated in the above referred tender: -

1. Section I, NIT, under Para 1

FOR:

Sl. No.	Short Description of Items	Quantity	EMD Amount (INR)
1	Supply of Dialysis Machines and other related items as per the scope of work, installation & commissioning of the same as per detailed technical specification in the tender enquiry document on turnkey basis	1	3,00,000.00
2	Echocardiography System with 3D facility and Color Doppler	1	120,000.00
3	Emergency Vehicle/Ambulance for Cardiac Support	1	200,000.00

READ AS:

Sl. No.	Short Description of Items	Quantity	EMD Amount (INR)
1	Supply of Dialysis Machines and other related items as per the scope of work, installation & commissioning of the same as per detailed technical specification in the tender enquiry document on turnkey basis	1	3,00,000.00
2	Echocardiography System with 3D facility and Color Doppler	1	1,20,000.00
3	Emergency Vehicle/Ambulance for Cardiac Support	1	2,00,000.00
4	**Invasive Cardiac Cathaterisation System (Cath Lab) (Turnkey)**	**1**	**12,00,000.00**

2. Section V, SCC

TO INCLUDE:

Table of Clauses

Sl. No	GCC Clause No.	Topic	Page No
1.	15.2	**Warranty:** The warranty for Cath Lab (item sl. no. 4) shall be for **3 (three) years** with all other warranty conditions same as per GCC Clause No. 15	28
2.	15.5	The warranty for the rectified/replaced goods shall be extended to a further period of 3 (three) years in case of Cath Lab.	29

3. Section VI, List of Requirement, under Part I

FOR:

Sl. No.	Short Description of Items	Quantity
1	Supply of Dialysis Machines and other related items as per the scope of work, installation & commissioning of the same as per detailed technical specification in the tender enquiry document on turnkey basis	1
2	Echocardiography System with 3D facility and Color Doppler	1
3	Emergency Vehicle/Ambulance for Cardiac Support	1

READ AS:

Sl. No.	Short Description of Items	Quantity
1	Supply of Dialysis Machines and other related items as per the scope of work, installation & commissioning of the same as per detailed technical specification in the tender enquiry document on turnkey basis	1
2	Echocardiography System with 3D facility and Color Doppler	1
3	Emergency Vehicle/Ambulance for Cardiac Support	1
4	**Invasive Cardiac Cathaterisation System (Cath Lab) (Turnkey)**	**1**

4. Section VII, Technical Specification

TO INCLUDE:

Item Sl. No. 4

Invasive Cardiac Catheterisation System (Cath Lab) (Turnkey)

(Note: Price of the various items in the Turnkey scope of supply/ work, should be quoted separately, item wise. The purchaser reserves the right to change or reduce the quantities)

01. Monoplane Digital Cardiac Catheterization Laboratory

1	**1.1 Single plane cardiovascular catheterization laboratory system with flat Panel Detector with Digital Subtraction Angiography, Digital Cine and Rotational Angiography. Floor mounted gantry for cardiovascular diagnostic and interventional procedures.** **1.2 System complete with High Pressure Contrast Injector, Haemodynamic And Electrophysiology Study System (Basic).** **1.3 Complete turnkey offer**
2	**TECHNICAL SPECIFICATIONS** **2.1 Gantry Floor Mounted:** **2.1.1 Floor Mounted L/C Arm gantry versatile motorized with integrated control and 3- axis mobility.** **2.1.2 Mannual override during emergencies.** **2.1.3 Angulation:** **LAO/RAO: at least ±120°** **Cranial/Candal: at least ±45** **2.1.4 Speed of rotation : LAO/RAO : 10°/sec or higher** **Cranial / Candal: 10°/sec or higher** **2.1.5 Non contact collision sensing mechanism to prevent the gantry collision with table (patient zone).** **2.1.6 Whole body-head to toe- coverage should be possible without repositioning the patient.** **2.2 Rotational Angiography provision with application software for 3D.** **2.2.1 Cone beam CT acquisition and CT image processing (desirable option).**
	2.3 Patient Support Table: **2.3.1 Floating 4 directional floor mounted table with carbon fiber table top.** **2.3.2 Length and width to cover all sizes of patients and all examinations including vascular. Preferred length 230 Lx W: 50cm** **2.3.3 Vertical, longitudinal and transverse movement should be possible. Specify ranges (preferred**

	vertical: longitudinal: 100cm, transverse : ±15cm). **2.3.4 Electromechanical brakes for table top movement** **2.3.5 Rail to hold control modules on either side.** **2.3.6 Patient weight should not be less than 200 kg. (Additional weight for resuscitation should be specified).** **2.3.7 Radiation protection device for the operator at the table (Upper body protection) and for legs below the table (Lower Body Protection).**
	2.4 X-Ray Generator: **2.4.1 Latest technology, high frequency x-ray generator suitable for cardiovascular examination.** **2.4.2 Power: 100 KW** **Range HT Voltage: 40-150 KVp** **Current Range: 600-1000 mA** **Min .Switching time: 1 ms in all focal spots.** **2.4.3 With programmable protocols and computer controlled optimal dose control and dose monitoring.** **2.4.4 Instantaneous automatic exposure control throughout the examination**
	2.5 X-Ray Tube: **2.5.1 Dual focal spot x-ray tube (preferred 0.4 and 4mm focal spots).** **2.5.2 Maximum output power- at least 80 KW in large focus.** **2.5.3 Anode heat storage capacity : not less than 1.5 MHU** **2.5.4 Fast heat dissipation in 10 minutes continuous fluoro run: not less than 3000 watts/min to provide uninterrupted run during interventional procedures.** **2.5.5 Internal / External Oil / Water circulated closed loop forced cooling to ensure long working duration.** **2.5.6 High quality tubes with noiseless maintenance free bearing to provide long life.** **2.5.7 Target angle: 8-11°** **2.5.8 Motorized collimator with special filters for cardiac contouring. Filtering at least 0.2mm copper equivalent.**
	2.6 Image Acquisition system: **2.6.1 Digital flat panel image acquisition system using CsI / aSi flat panel detector.** **2.6.2 Matrix size : 1024 x 1024** **2.6.3 Actual flat detector size=25cm diagonal (with zooming capacity to 20 and 10 cm(approx))** **2.6.4 Pixel size: smallest possible (approx: 150µm)** **2.6.5 All image quality parameter should be high.**

	Specify: high contrast resolution at 0 % MTF **Low contrast delectability and DQE at 0%MTF** **2.6.6 Variable frame rate (at least 7.5 to 30 fps).** **2.6.7 The detector should be light weight, non fragile, and adequately protected against collision.**
	2.7 Display Monitors: **2.7.1 Total number of 6 numbers high definition flat panel TFT monitor should be supplied. Size- atleast 18 inch diagonal.** **Two monitors (monochrome) for live and road-map images respectively. (Gantry / Table position monitor if separate, also should be accommodated additionally)** • **One color monitor for physiological signals monitoring. (21 " Size). These monitor in the exam room should be in a ceiling mounted boom.** • **One image monitor and one data monitor in console room.** • **One monitor with the professional DVD / CD writer (Sixth monitor), complete with software for recording / playback DVD / CD of diagnostic quality and reporting & printing software.** • **The cable-ling (including that of power / various transducers / tubings) of these monitors should be integrated or to be such that they do not cause hindrance in the functioning of the angiography / catheterisation procedures.**
	2.8 High definition digital fluoroscopy : **2.8.1 Atleast 8 bit acquisition in 1024 x 1024 matrix.** **2.8.2 Fluoro frame grab and replay facility.**
	2.9 Digital Acquisition and Digital Processing: **2.9.1 Acquisition matrix : 1024 x 1024** **2.9.2 True online Digital Subtraction Angiography : 1024 x 1024 matrix** **2.9.3 With advanced post processing facility** **2.9.4 Series exposures with frame rates 7.5/ 10/15 /30 fps** **2.9.5 Pulsed fluoroscopy with grid switching should be standard** **2.9.6 Provision for minimum radiation exposure (maximum radiation protection – computer controlled).** **2.9.7 DICOM.3 components for data acquisition, storage, printing, worklist, query etc to be supplied. Details to be provided.**
	2.10 Communication and Archiving: **2.10.1 Reviewing, post processing, archiving, networking facilities (to be PACS enabled in future)** **2.10.2 DICOM based DVD/CD recording for dynamic recording on CD. High quality Professional DVD/CD writer with high definition monitor.(ref 2.7.2)- with 300 DVDs** **2.10.3 Recorded DVD/CDs should have DICOM software embedded for instant review on any standard PC**

	2.10.4 It should be possible to record DSA runs (digital cine) in CD/DVD. **2.10.5 Image archiving capacity atleast 50,000 images of 1024 x 1024 matrix (additional advantageous).** **2.10.6 System should have the latest application software for QCA and LVA** **2.10.7 System should have ability to record on a single DVD, multiple patient studies. Such DVDs should be capable of directly viewed on any standard PC.** **2.10.8 Remote services diagnosis.** • **The cable-ling (including that of power / various transducers / tubings) of these monitors should be integrated or to be such that they do not cause hindrance in the functioning of the angiography / catheterisation procedures.**
	2.11 High speed, High pressure contrast injector: **2.11.1 Automated, motorized high speed, high pressure contrast injector with twin syringes.** **2.11.2. With ECG triggering. Interface** **2.11.3 To be supplied with 4 nos disposable syringe and 200 nos disposable syringes.**
	2.12 Hemodynamic and Electrophysiological Recording System: **2.12.1 State of the art multichannel hemodynamic and electrophysiological system of high quality, reliability and reputation with integrated computer (basic).** **2.12.2. Parameters: 12 lead ECG- Intracardiac ECG- multiple channels Invasive Blood pressure-4 Channel Cardiac Out-Put- 1 Channel N1BP x 1, Spo2 x 1** **2.12.3. EP recording and analysis as well as hemodynamic recording. Latest software.** **2.12.4. Two monitors: one in exam room one with the boom, one with technician and one Monitor with control console.(size 18", TFT colour).** **2.12.5. High quality laser jet printer and DVD recorder.** **2.12.6. Full fledged EP recording, RF Ablator and stimulator should be quoted as separate option.**
	2.13: Hemoximeter: 1 No: **2.13.1 Hemoximeter for measuring Hb and Oxygen Saturation during cardiac catheterization.** **2.13.2 Complete with all accessories and consumables (like rinse solution, calibration solution etc.) for one year.** • **Assesories The cable-ling (including that of power / various transducers / tubings) of these monitors should be integrated or to be such that they do not cause hindrance in the functioning of the angiography / catheterisation procedures.**
	2.14: ACT machine: **ACT Machine with cartridges and tubes for 100 examinations - 1 No:**
	2.15: Defibrillator / monitor on crash cart :

	• **Biphasic defibrillator with adult and pediatric paddles.** • **With monitor and recorder.** • **Rechargeable battery, built in charts.** • **200J biphasic wave form (max)** • **High quality crash cart with defibrillator mounting .** • **With backboard, 02 cylinder(small), bins and drawers, (3" & 6" approx.), portable vacuum pump, essential instruments for examination, , ambu-bag, airways, bite-blocks, anaerobic BP apparatus, stethoscope, torch etc.** • **The cable-ling (including that of power / various transducers / tubings) of these monitors should be integrated or to be such that they do not cause hindrance in the functioning of the angiography / catheterisation procedures.**
	2.16: <u>External pace maker with leads: X 1 no</u>: - **Advanced external Pacemaker- Dual chamber for temporary pacing with pacing cables.** - **With pacing electrodes and introducers.**
	2.17: <u>Examination Light: 1 no:</u> - **Ceiling mounted examination Light** - **Light weight, with small head and autoclave-able handle.** - **Single dome with halogen lamp and filter.** - **Light output (approx): 10,000 Lux.** - **Retractable arms.** - **With low leakage current (working on low voltage DC supply)**
	2.18: Lead Glass – 1 No: - **between the console and exam room** - **Appropriate Size (approx.)- 200x 100cmx 3mm thick .**
	2.19 <u>Protective gears:</u> **2.19.1. Protective apron of atleast 0.5mm lead equivalent - 12nos** **2.19.2. Protective gonad shield atleast 0.35mm lead equivalent - 12nos** **2.19.3. Thyroid collars – 12 nos** **2.19.4. Lead goggles(eye glass)- 12 nos**
	2.20. Advanced two way communication system between the console room / monitoring room.
	2.21: <u>Vital sign monitor for the recovery area (2 bedded)</u> : Quantity – 2 Nos. - **One compact vital sign monitor with ECG (2 ch), NIBP, temperature and Spo2.**

	- **2 wave display.** - **10" diagonal (min), colour TFT screen.** - **With all transducers, sensors and cables (adult & pediatric).** - **Leakage current should be as per IEC 60601 norms.** - **Should be transportable with at least 2 hrs battery back-up for full functions.**
	2.22. 3 panel X-ray film viewer – 1 No: - **High quality viewer with dimming facility.**
	2.23. Complete set of phantoms for cath lab. - **All necessary phantoms to be supplied. List of all necessary Phantoms to be submitted. (to be elaborative / specified)**
3	**3 Environmental factors:** **3.1. The unit shall be capable of operating continuously in ambient temperature of 10°C to 40°C and relative humidity of 15-90%.** **3.2. The unit shall be capable of being stored continuously in ambient temperature of 0° to 50°C and relative humidity of 15-90%.** **3.3. Wherever applicable units and subsystems shall meet IEC-60601-1-2:2001 or equivalent safety standards.** **3.4. The chosen supplier would be asked to undertake a turnkey project wherein all necessary civil works , modifications, like false ceiling, wall paneling, tiling, antistatic flooring, electric power and light installations, finishing works etc. done by them under the supervision of the HLL staff or staff nominated by them.** • **The supplier should provide facilities for all rooms indicated like exam room, cabinet room, recovery room, store room, change rooms, catheter wash, scrub area, nurse's room, store room, doctor's room etc. including counters, storage furniture, other general furniture (tables, chairs, cupboards, etc.)** • **All hospital furniture like recovery beds, patient trolleys, bed head units, catheter cabinets, scrub and wash sinks and fittings, guide wire storage draws, gown disposal trolley, work bench, nurses trolley, IV stands, storage shelves, kick bucket, waste bin, mobile chairs, wheel chairs etc. should be supplied** • **Suggested layout of cathlab and associated area in attached. Modification essential to suit proper installation of the equipment and convenient patient and staff flow may be done.** • **Furnishings and fittings should be of highest quality. Existing ESIC standard for construction and materials should be adopted.** **3.5. Appropriate air-conditioning should be provided by the supplier and maintained throughout the warranty period.** • **Satisfactory room temperature humidity and air changes should be maintained to provide safe operation of the equipment and human comfort.** • **The air conditioning system should be connected to the standby generator to provide power in**

	emergency. **3.6. Proper lead shielding should be done to minimize radiation leakage as per AERB regulations and manufacturers recommendations.** **3.7 AERB clearance required for installation& import should be obtained by the supplier.**
4	**4. Power supply:** **4.1. Provision of the power cable from the substation or from the nearest available point to the cathlab and terminating in the switch of required capacity is the duty of the supplier.** • **Wiring for lighting and power plugs and circuits for ancillary equipment should be planned and executed by the supplier.** • **Proper reset switches for over current protection and breakers should be provided.** **4.2. Online UPS to be provided for the entire cathlab including X-ray generator with a full function support time of 30 minutes.** **4.3. Power requirement of appropriate capacities for the entire turnkey components including the domestic load (*125 kVA)* to be provided through cable from substation to generator house and automatic change over switch and from there to the cathlab.** **4.4 Stand by generator: The capacity of Generator should be designed such that it has appropriate capacities for the entire turnkey components including the domestic load (125kVA) and should also address the issue of Optimal running efficacy.** **Construction of generator house, as well as supply, installation, warranty and post warranty maintenance of the generator will be the responsibility of the supplier. All essential clearance for such works should be obtained from relevant authorities. Appropriate care to be taken so that the noise level should be as per the international standards and not to be more than 35 / 45 dB.**
5	**Standards, safety, training:** **5.1. System should be FDA/CE approved.** **5.2. Wherever applicable, systems and subsystems should confirm to electrical safety standards IEC 60601.1 general requirements.** **It should also confirm to the relevant mechanical safety standards.** **5.3. Manufacturer should have ISO certification for quality standards.** **5.4. System should comply with AERB regulations.** **5.5. Application and users training should be provided at site to the full satisfaction of the user.** **5.6. Supplier should conduct acceptance test according to standard international protocols prior to handing over to confirm that performance is acceptable.** **5.7. Proper shielding should have to be done by the supplier to minimize radiation leakage as per AERB and BARC regulations. Getting the formalities done from the consignee and obtaining all the AERB / BARC or any other approvals timely would be the bidders responsibility.**
6	**6. Documentation:** **6.1. User manual in English(at the time of supply)** **6.2. Complete set of service manual (hard copy & soft copy) (with operating principles, technical principles,**

	schematics, circuit diagram parts list and trouble shooting, calibrations, testing, maintenance & repairs;) to be supplied. **6.3. Acceptance test certificates from factory & for test conducted at site. (At the time of supply).** **6.4. Preventive maintenance schedule & protocol. (At the time of supply).** **6.5. Details of infrastructure available for maintenance: list of test equipment and details of engineers available with the supplier.** **6.6. Users list and performance certificate of atleast 5 cathlab installations with past 5 years from government institutions should be submitted along with the techno- commercial bid.** **Attached:** **Proposed Layout of the Cath lab.** **Note: The layout attached, is a proposed one. However, the bidders are free to make appropriate modifications (like room sizes and locations) for improvisations, keeping all the various components of the Plan intact.** **Such modified drawings, will have to be got certified by HLL Lifecare Limited.** **Bidders are strongly advised to visit the site for assessment before the submission of tender offer.**

2.0 Rotational Atherectomy System – 1 No.

The standard rotational atherectomy system should include the Advancer, Catheters, Pre-Connected Exchangeable System, Guide Wires and System Lubricant.

Advancer

The Rotational Atherectomy System should have features facilitating the use of multiple catheters of varying burr sizes with a single advancer.

- Catheters should connect and disconnect from the advancer quickly and easily.
- The System should offer procedural flexibility and a cost effective multi-burr approach.

Pre-Connected System

This Exchangeable System should be convenient to use, and the pre-connection should help to save valuable time. It should utilizes the advancer and catheter.

- The first burr should be already connected to the advancer.
- Should be able to simply take the system off the shelf and start intervention.
- Should be able to Size up to a large burr.

Guide Wires

Should be compatible with the above system.

Should be able to meet the following needs of rotational atherectomy:

- Short spring tips for athroablation of distal lesions.
- Different, tapered shafts provide varying degrees of burr support.

Lubricant

It should be a lipid based emulsion designed to lubricate the Rotational Atherectomy System. Intended to:

- Reduce friction within the Rotational Atherectomy System System.
- Reduce heat build-up around the Rotational Atherectomy System Burr.
- Decrease the amount of force required to advance the burr.
- Facilitate ease of burr travel over the guide wire and through the guide catheter.

Console and Foot Pedal

- The Rotational Atherectomy System console should regulate the flow of air to the advancer, controlling burr rotation speed. It should also monitors and displays burr rotation speed, and rotational atherectomy procedural time.

The foot pedal should activate the burr by initiating the flow of air through the system. It should also switch the system into and out of Dynamic mode, which facilitates burr exchange or removal.

3.0 IVUS – 1 No.

Latest generation **Integrated Intra Vascular Ultrasound Imaging System** which is useable and interface-able with all IVUS catheters available in the market for coronary, peripheral and carotid IVUS studies. This system should be Integrated with the Cath Lab. Ultrasound Operational Frequency to be 40 – 45 MHz.

To be supplied complete with:

- **Complete Console**
- **Complete Application Software**
- **Mobile Cart with Monitor**
- **One additional Monitor to be connected and accommodated in the Cath Lab Boom.**
- **Recording & DICOM facility**
- **At least 18 IVUS catheters (6 Nos. each for sizes 0.014", 0.018" and 0.038") to be provided free of cost.**
- **All controlling consoles of IVUS machine should be mounted on the Cath Table and also in the monitoring room.**

4.0 EtO Sterlizer : 1 No.

BenchTop Model to be Installed in Cath-Wash area, mainly to be used to sterile Catheters and other reusable used in Cath lab.

(The hi-pressure compressed air connection, if required, will be in the scope of turnkey works. The same can be made available from the existing hospital compressed air supply. In that case, only the extension work has to be carried out.)

Technical Specification:

Should have FDA CLEARANCE
Should have CE MARK (MDD)

CHAMBER	
Size, m^3 (ft^3)	0.14 (approx)
Jacket material	Anodized aluminum
TYPE OF GAS	100% EtO, EtO/CO2, EtO/HCFC
SINGLE-USE 100% EtO	
STANDARD CYCLE	
Chamber pressure, psig	Negative-pressure system
Warm temp, °C (F)	55 (131)
Cold temp, °C (F)	37 (98.6)
Full cycle time, hr	3.75 warm, 5.5 cold
EtO exposure, hr	1 warm, 3 cold
DOOR(S)	

Configuration	Single
Operation	Manual, self-locking
Hinge 1 door	Front-right side
LOADING EQUIPMENT	User preference
IN-CHAMBER AERATION ≤100 hr	
RECORDER/PRINTER	Graphic and alphanumeric recorder
AUDIBLE ALARMS	Yes
INSTALLATION	
1-door sterilizer	Cabinet-enclosed, recessed, rack-mounted; can be placed on an elevated, stationary rack for ease of servicing, loading, unloading.
OTHER SPECIFICATIONS	Localized vent system; error codes; power-interruption restart; vacuum-operated cartridge puncture; all negative-pressure cycle; custom cycles upon request; optional relative-humidity monitor; optional EO-Abator. Meets requirements of CSA, TUV, and UL. Built-in Enviro-guard exhaust hood; battery backup; supervisor access code; aerate-pause capability; optional kit for seismic installations.

Turnkey for Cath Lab

(Price of the Turnkey work should be quoted separately, i.e. should not be included in the price of Cath – Lab and other equipments)

The term turnkey work includes all modifications to the built up space provided at the hospital site including civil works, electrical works, interior decoration, air conditioning, power backup (DG Set and UPS), furniture and other related works of the centre required for the smooth and efficient functioning of the centre. These works shall comply with all relevant safety and standards guidelines.

A rough sketch of the layout along-with approximate dimensions has been attached for reference purpose only. However bidders are strongly advised to visit the site for assessment before the submission of tender offer.

To be provided by the Consignee:

1. Area bounded inside the line (_____ _____ _____ _____) in the drawing attached.
2. Raw power availability at Transformer / sub-station as per the load requirements as specified by the bidder.
3. Assess to the site for construction, demolition (if required, under necessary case to case approvals), commissioning, installation, etc.
4. Necessary documentation, as requested and produced by the bidder for availing AERB / BARC approval.
5. Temporary electrical power for general lightening and running of electrical equipment during construction / re-construction / commissioning / installation / testing phase.

Turn Key to be provided by the Bidder

1. Bidders are suggested to visit the site for self assessment before the pre-bid meeting.
2. Structural Strength analysis has to be carried out to ensure proper sustainable building strength (including floor and roof) for at least 20 years. Dismantling / demolition / strengthening / re-construction work of old structure, wherever required should be carried out,
3. Construction / re-construction, commissioning and installation to be strictly carried as per prevailing AERB / BARC norms.
4. Rate per sq.ft for lead lining to be quoted in the event of the wall thickness does not meet the AERB requirements (For ranking purpose 1500Sq ft will be considered).
5. Flooring / Strengthening of flooring.
6. Roof / Strengthening of roof.

7. False ceiling
8. Vitreous Tiles on the walls however in case the lead linings are provided, the cost may be adjusted accordingly.
9. All cable trenches and railings wherever required.
10. DG Set and UPS of Relevant capacities and specifications for workload of a medical college and attached hospital, the paneling and cableling work associated with it. The warranty and maintenance terms of these will also be same as mentioned in the tender document and will be sole responsibility of the bidder.
11. All electrical accessories like cable wire, electrical outlets, switches, etc should be fire proof, of reputed make, certified for electrical safety.
12. Bidders to specify their electrical load requirements for making the Raw power available upto the site.
13. All AERB / BARC approvals in a timely manner. The consignee will give the necessary supporting documents and signatures, on production of the same from the bidder.
14. Any other necessary work required for satisfactory working of the equipment.
15. The bill of quantities should be clearly spelt out, with price break-up of individual items. Rates per unit / running feet / square feet should be clearly mentioned on the basis of which the total turnkey work will be calculated.

Schedule of Finishes-

1. Bidders are strongly advised to visit the site and carry out the assessment.
2. The thickness of the walls should be according to AERB/BARC norms.
3. Should provide lead lining where ever required. (Doors, Etc.) as per AERB/BARC norms.

Schedule of Finishes: Quote price per square feet

- **Extension of Existing Medical Gases Pipe Line (O2, Compressed Air, Vacuum) to Gantry Room and Recovery Area (2 Bedded)**

S.No.	Room	Flooring	Skirting/Dado	Walls	Ceiling
1.	Staff / Prep Cath Store	300x300x8.5 mm thick mirror stone tiles.	100mm high tile skirting to match floor.	Cement plaster & Emulsion paint	Perforated Al. Panel False Ceiling with acoustic lining & Al. suspension
2.	Nursing Station	300x300x2.0 mm thick vinyl tiles	100mm high hard wood skirting	Prelaminated particle board wall paneling	-Do-
3.	Physiological Monitoring Room	300x300x8.5 mm thick granite	100 mm high granite tiles skirting	Cement plaster and anti-static & anti bacterial plastic emulsion paint	-Do-
4.	Cath-Lab Gantry Room				
5.	Electrical / Panel / Cabinet room	52mm thick cement concrete flooring with hardener	100 mm high cement plaster skirting	Cement plaster and dry distemper paint	Plaster and dry distemper
6.	Store / Doctors Room / Change Room / Cath Recovery / others	300x300x8.5 mm thick ceramic tiles (polished on counter top)	100x200x5 mm thick glazed tiles upto door height from floor level.	Plaster & oil bound distemper on walls above false ceiling	Gypsum board false ceiling with oil bound distemper paint
7.	Scrub Area	300x300x8.5 mm thick ceramic tiles (polished on counter top)	100x200x5 mm thick glazed tiles upto false ceiling height from floor level.	Plaster & oil bound distemper on walls above false ceiling	Gypsum board false ceiling with oil bound distemper paint
8.	Cath Wash	300x300x8.5 mm thick ceramic tiles (polished on counter top)	100x200x5 mm thick glazed tiles upto false ceiling height from floor level.	Plaster & oil bound distemper on walls above false ceiling	Gypsum board false ceiling with oil bound distemper paint

AIR- CONDITIONING

1. Should provide split a/c with wireless remote control separately to Gantry room, Operating and Study consoles, reception etc.
2. The capacity of the a/c should be sufficient to maintain the required temperature and humidity.
3. Accurate Digital Temperature and humidity meter to be provided in all air-conditioned rooms.
4. Connecting them to the Electrical Supply and Generator supply.
5. It is the responsibility of the bidder to provide all the air-conditioning and electrical equipments and accessories.

Schedule of furniture:

Following furniture should be provided by the bidder:

All the furniture should be of reputed make, termite resistant, long life and ergonomically designed for comfortable usage.

AREA		DESCRIPTION	QTY.
Waiting & Reception	:	Reception desk in block board construction with granite top	1 No.
	:	Storage cupboard	1 No.
	:	Reception chair	1 Nos.
	:	PVC moulded chairs on common steel stand in group	12 Seats
	:	Corner Table	4 Nos.
Physiological Monitoring Room	:	Low backed swing chairs on castors with armrests	3 Nos.
	:	Film Viewer (6 maximum size films)	1 No.
Cath-Lab Room	:	Drug trolley on castors	1 No.
	:	Lead Aprons (Light weight)Stand	4 Nos.
	:	Glass Door Lockable Cabinet to keep the Catheters:	2 Nos.
	:		
Patient preparation	:	Patients couch	1 No.
	:	Drug trolley	1 No.
	:	Examination Stool	1 No

Electrical Works:

a. Incoming Power cable: Power cable to be terminated in the 250 A isolator at the location of the proposed installation site.
b. Earth pits: Earth pits should be provided for protective earthing of the equipment, as per International Standards.
c. Mains cabling: Mains cabling will be carried out from the isolator to UPS, MR power panel and equipment.
d. Power panel: Power panel will be provided with suitable MCBs
e. Room lighting in console room and equipment: Suitable light fittings will be provided.
f. Online UPS: Online UPS will be provided for a back up time of 30 minutes.
g. DG set: A DG set of sufficient capacity will be installed for providing a 100% back up power for the whole diagnostic centre.

Data Cabling:

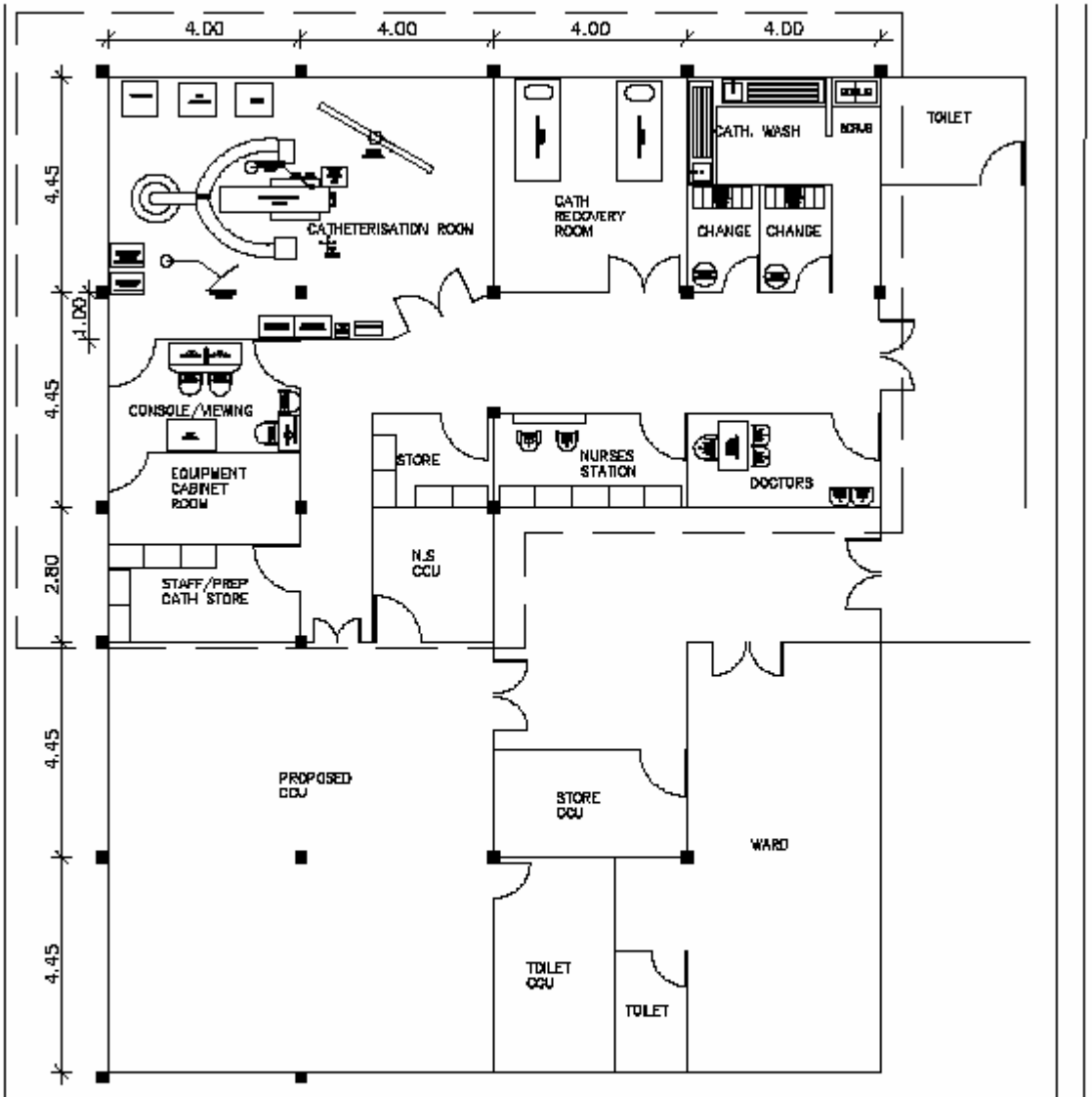
Data cabling for broadband internet connectivity for urgent contact of service matters for both national and international levels. (PACS enabled DICOM compatible network); Should be connected to the existing hospital network.

Fire Fighting:

Fire extinguisher Dry CO2 type

Attached:
Proposed Layout of the Cath lab shown in the next page.

Note: All other contents of the Tender Enquiry Documents remain unaltered.



Note: All dimensions are in Meters

Proposed Cathlab for the ESIC Super Speciality Hospital Kollam