



**UNDER
Ministry of Health & Family Welfare
(GOVERNMENT OF INDIA)**

**Tender For
Upgradation of Cold Chain Facilities at GMSD Chennai.**

Volume – IV-Chennai

Financial Bid & BOQ



December 2012

**HLL Lifecare Limited
B – 14A, Sector – 62,
NOIDA – 201301.**

SUMMARY PRICE BID GMSD CHENNAI

S.NO.	DESCRIPTION OF WORK	TOTAL TENDERED COST AS QUOTED BY BIDDER (IN RS.)
1.	CIVIL WORKS	
2.	ELECTRICAL WORKS	
3.	AIR CONDITIONING & FIRE FIGHTING WORKS	
	TOTAL (1+2+3) in words & figure	

<u>PRICE BID</u> <u>CIVIL WORKS</u> <u>GMSD CHENNAI</u>		
Sub Head No.	ITEM/ WORKS	TOTAL AMOUNT OF WORKS AS PER BOQ (IN RS.)
1	CONCRETE WORK	
2	REINFORCED CEMENT CONCRETE	
3	BRICK WORK	
4	FLOORING	
5	FINISHING	
6	CONCRETE PAVEMENT / ROAD WORK	
7	ALUMINIUM WORK	
8	EXTERIOR GRADE METALLIC FALSE CEILING. FOR CANOPY	
9	INTERIOR METALLIC FALSE CEILING.	
10	CANOPY	
11	EARTH WORK	
12	DISMANTLING & DEMOLITION	
13	CARRIAGE OF MATERIAL	
	TOTAL	

Schedule of Quantities CIVIL WORKS GMSD CHENNAI						
Item No.	DSR. No.	Description of Items	Qty.	Unit	Rate Rs.	Amount Rs.
SubHead:1		CONCRETE WORK				
1.1	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1.10	1:5:10 (1 Cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size).	77	cum		
1.2	4.10	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size).	27	sqm		
1.3	4.13	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	27	sqm		
				SubHead Total		
SubHead:2		REINFORCED CEMENT CONCRETE				
2.1	5.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.2	1:1.5:3 (1 Cement : 1.5 coarse sand : 3 graded stone aggregate 40 mm nominal size).	7	cum		
2.2	5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15 deg landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases upto floor five level excluding the cost of centering, shuttering, finishing and reinforcement with 1:2:4(1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size).	8	cum		
2.3	5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				
	5.22.6	Thermo-Mechanically Treated bars.	1950	Kg		
		FORM WORK				
2.4	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete.	11	Sq.m		
	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	76	Sq.m		
	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.	10	Sq.m		
				SubHead Total		
SubHead:3		BRICK WORK				
3.1	6.1	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:				
	6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	100	cum		
3.2	6.4	Brick work with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	91	cum		
				SubHead Total		

Item No.	DSR. No.	Description of Items	Qty.	Unit	Rate Rs.	Amount Rs.
SubHead:6		CONCRETE PAVEMENT				
6.1	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead upto 50 metres.	203	sqm		
6.2	16.3	Supplying and stacking at site :				
	16.3.1	90mm to 45mm size stone aggregate.	36	cum		
	16.3.7	Stone screening 11.2mm nominal size (Type B).	8	cum		
	16.3.9	Good earth.	8	cum		
6.3	16.4	Laying spreading and compacting stone aggregate of specified sizes to WBM specifications including spreading in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne in stages to proper grade and camber, applying and brooming requisite type of screening/binding material to fill up interstices of coarse aggregate watering and compacting to the required density.	51	cum		
6.4	16.7	Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres.				
	16.7.1	With F.P.S. Bricks of class designation 75	82	metre		
6.5	16.43	Providing and laying design mix cement concrete in roads, taxi tracks and runways having a minimum works test beam flexural strength of 30kg per cm ² at 28 days using not less than 340kg of cement per cum of finished concrete, coarse sand and graded stone aggregate of 40mm nominal size in appropriate proportions as per specified design criteria approved by Engineer-in-charge mechanically vibrated using needle and surface vibrators including steel form with sturdy M.S. channel sections including curing and providing and filling construction joints and dummy joints with approved joint filler and primer including rounding of the edges and filling the grooves 10x25mm deep at top for construction joints and 10mmx50mm deep at top for dummy joints with joint sealing compound (conforming to grade B of IS:1834) including making necessary arrangements for expansion joints etc. all complete.	30	cum		
6.6	16.68	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction and of approved size and design/ shape laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with coarse sand etc. all complete as per the direction of Engineer-in-charge.	32	sqm		
				SubHead Total		

Item No.	DSR. No.	Description of Items	Qty.	Unit	Rate Rs.	Amount Rs.
SubHead:8		EXTERIOR GRADE METALLIC FALSE CEILING. FOR CANOPY				
8.1	N.S	PRECOATED STEEL FALSE CEILING SYSTEM:				
		Supply & Fixing of equivalent make- Trac , luxalon, Sonex, Armstrong Coil Coated Steel False Ceiling system manufactured out of 0.5mm thick Galvanised Sheet (Z-180gms /Sq.Mtr. zinc coating mass total of both sides, 275Mpa yield stress) with Polyester coat of 20 micron on the face side and 5 micron on the back side. The ceiling system shall comprise panels of 150mm wide panels of 150mm width x 17mm deep roll formed out of 0.50mm thick polyester coated galvanised steel fixed on steel runner in size of 34.5mm wide x 48mm deep manufactured out of 0.60mm thick Pre-coated galvanised steel with rigid suspension arrangement consisting of G.I. angles, bracket, clamps etc, including all hard ware required for fixing the ceiling. The runner shall be fixed at 1 mtr. c/c and suspension angle at 1 mtr.c/c. The panel shall be factory cut in max length of 6 mtr. The panel shall be jointed after 6mtr.with special G.I. Splice in between two panel. The work shall be carried out strictly as per	75	Sq.M		
					SubHead Total	

Item No.	DSR. No.	Description of Items	Qty.	Unit	Rate Rs.	Amount Rs.
SubHead:9		INTERIOR METALLIC FALSE CEILING.				
9.1	N.S	FALSE CEILING SYSTEM- STEEL (WITH LAY IN SUSPENSION)				
		Supply of TRAC , luxalon, Sonex, Armstrong or any other approved make lay in Tile Steel Coated False Ceiling System (600mm X 600mm) manufactured out Of 0.50mm thick Regular Modified Polyester Coated Galvanised Steel (Z-180gms Zinc coating mass Total of both sides, 275Mpa yield strength) on the exposed side and primer coating on the back coil Coated on both the sides in manufacturer's standard colour shades, with square or bevelled edges and Flanges, produced on advanced equipment, which includes several levelling stages in the manufacturing Process. Exposed side of tile shall have 20 micron coil coated polyester finish and 5 micron back coat of				
		All tiles to be installed on a standard 600mm x 600mm module 24mm table exposed metal Grid and are precision made to within plus or minus 0.25mm. Suspension system would be standard 24mm Table exposed metal grid features main runners and cross tees roll formed from galvanised steel to BS 2989Z-18 zinc coating, minimum tensile strength 270 Mpa.				
		Grid system to be designed to satisfy ASTM C635 loading and deflection criteria. The main and cross runner to be provided with bayonet couplings For quick installation and shall have a height of 38mm. The grid is suspended from the roof with G. I. Wire rods or quick adjustment suspension hangers at maximum 1200mm along the main runners. The Tiles would be designed for lay- in mounting from below into the standard grid. The main runner shall Normally be fixed at 1200mm and shall be in filled with 1200mm / 600mm cross tees. Hangers to be fixed to roof by expansion fasteners. Wall angle to be 25 x 25 x 0.6mm thick coil coated steel matching the colour of tile.	445	Sq. M		
9.2	12.1	Providing corrugated G.S sheet roofing including vertical/curved surface fixed with polymer cated J or L hooks bolts and nuts 8 mm diameter with bitumen and G.I limpet washers or with G.I limpet washers filled with white lead and including a cast of approved steel primer and two coats of approved paint on overlapping of steel complete (up to any pitch in horizontal/ vertcal or curved surfaces excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.				
	12.1.3	0.63 mm thick with zinc coating not less then 275gm/m3	71	Sq. M		
				SubHead Total		

<u>PRICE BID</u> <u>Internal Electrical Works</u> <u>GMSD CHENNAI</u>		
Sl. No	ITEM/ WORKS	TOTAL AMOUNT OF WORKS AS PER BOQ (IN RS.)
A.	<u>Internal Electrical Works</u>	
1	WIRING	
2	EARTHING	
3	FANS & FITTINGS	
4	COMPUTER POINT	
5	TELEPHONE POINT	
	TOTAL (IN FIGURES)	
	TOTAL (IN WORDS)	

<u>Schedule of Quantities Internal Electrical Works</u> <u>GMSD CHENNAI</u>						
Sr.No.	DSR Item	Description	Unit	Qty.	Rate	Amount
A.		<u>ELECTRICAL</u>				
	Sub Head: 1	<u>WIRING</u>				
1.1	1.1	Point wiring in steel conduit of 20mm dia, with modular type switch (NORMAL) Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.				
1.1.1	1.3.3	Group C	Point	50		
1.2	1.5	Power plug wiring in steel conduit of 20mm dia. Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit along with 1 No 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	Meter	280		
1.3	1.31	S/F light plug point modular type accessories:- Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection, painting etc. as required.	Each	29		
1.4	1.32	S/F power plug point modular type accessories: Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 15/16 & 5/6 amps modular socket outlet and 15/16 amps modular switch, connection, painting etc. as required.	Each	14		
1.5	1.7	Circuit/ sub main wiring in steel conduit: Wiring for circuit/ sub main wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required				
1.5.1	1.7.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Meter	100		
1.5.2	1.7.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Meter	120		
1.5.3	1.7.3	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Meter	200		
1.5.4	1.7.4	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Meter	0		
1.5.5	1.7.10	4 X 10 sq. mm + 2 X 10 sq. mm earth wire	Meter	25		
1.5.6	1.7.11	4 X 16 sq. mm + 2 X 16 sq. mm earth wire	Meter	60		
1.5.7	N.S	4 X 25 sq. mm + 2 X 16 sq. mm earth wire	Meter	50		
1.6	1.21	S/F PVC conduit : Supplying and fixing of following sizes of PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.(For TV, Internet, Telephone)				
1.6.1	1.21.1	20 mm	Meter	150		
1.6.2	1.21.2	25 mm	Meter	80		

Sr.No.	DSR Item	Description	Unit	Qty.	Rate	Amount
1.7	1.22	S/F metal boxes :				
		Supplying and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.				
1.7.1	1.22.2	100 mm X 100 mm X 60 mm deep	Each	13		
1.7.2	1.22.5	180 mm X 100 mm X 60 mm deep	Each	8		
1.8	N.S	Supply & Laying 3.5 Core 70mmSq. XLPE Insulated Armoured Underground Cable Including excavation, sand cushioning Protective covering & refilling trenching etc. as reqd. (as per CPWD Specification)	Meter	200		
		SWITCHES & ACCESSORIES				
1.9	1.24	S/E modular type switch/socket:				
		Supplying and fixing following modular switch/socket on the existing modular plate and switch box including connections but excluding modular plate etc. as required.				
1.9.1	1.24.1	5/6 amps switch	Each	40		
1.9.2	1.24.6	Telephone	Each	2		
1.10	1.35	Erection of incandescent light fittings. Erection of wall bracket/ceiling fittings of all sizes and shapes containing up to two CFL lamps per fitting, complete with all accessories including connection etc. as required.	Each	36		
1.11	1.41	ITC fluorescent fitting directly on surface : Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling/ wall, including connection with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	14		
1.12	1.50.1	ITC exhaust fan up to 450 mm sweep : Installation of exhaust fan up to 450 mm sweep in the existing opening, including making the hole to suit the size of the above fan, making good the damage, connection, testing, commissioning etc. as required.	Each	6		
1.13	1.51	Fixing louvers/ shutters for exhaust fan: Extra for fixing the louvers/ shutters complete with frame for a exhaust fan of all sizes.	Each	6		
		PRE-WIRED MCB DISTRIBUTION BOARDS				
		MCB,s				
1.14	N.S	S/F 'B' series, SP MCB : Supplying and fixing 5 amps to 32 amps rating, 10KA 240 volts, 'B' series, miniature circuit breaker suitable for lighting and other loads of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
1.14.1	N.S	Single pole	Each	22		
1.14.2	N.S	63A RCCB	Each	1		
1.15	2.11	S/F 'B' series, SP MCB blanking plate : Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	Each	2		

Sr.No.	DSR Item	Description	Unit	Qty.	Rate	Amount
1.16	N.S.	S/F 20A SPN MCB prewired industrial socket outlet :				
		Supplying and fixing 20amps, 240 volts, SPN prewired industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 amps 'C' series, SP, MCB, in CRCA steel sheet, phosphatised Powder painted enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required as per Legrand Catalogue No. 607841 and 603235 or equivalent of Havell's, L&T Hagger etc. (Normal 377+Emergency 171+UPS 43)	Each	4		
1.17	N.S	PRE-WIRED MCB DISTRIBUTION BOARDS				
		S/I/T/C Prewired MCB Distribution Board, 4+24, 8 Way TPN Double door.	Set	1		
1.18	N.S	Fabrication supplying installion testing & commissioning of cubical type fully enclosed compartmentalized electrical panel of suitable size for three phase 50HZ 415 volt AC supply made out CRCA sheet duly strengthened with suitable size of MS channel members and base weather proof, dust and vermin proof, ventilated with louvers at sides removable gland plates at the bottoms, earthing studs at both ends, duly painted with powder coated finish of approved shade and two coats of anti corrosion paint i/c providing and fixing of following accessories -/Switches/MCB's/MCCBs complete with four strip main and auxillary Aluminum conductors as required. (MCCB 25/36 KA, MCB's 10KA incoming 4 pole outgoing TP)				
		Incomer :-	Lumpsum			
		Incomer :- 100A 4 PMCCB (Main) - 1 No.				
		Incomer :- 100A 4 PMCCB (D.G Set) - 1 No.				
		Bus Coupler :- 100A - 1 No.				
		Outgoing:-				
		60A TPN MCCB - 3 Nos.				
		32A DP MCCB - 3 Nos.				
		32A TPN MCCB - 3 Nos.				
1.19	1.37	S/F 600 mm stiff pendent with wiring:				
		Supply and fixing stiff pendent with 600 mm long, 20 mm dia X 1.6 mm thick steel conduit, aluminium cast back plate and brass holder complete, including wiring the down rod with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and painting etc. as required.	Each	14		
			SubHead			
	Sub Head: 2	EARTHING				
2.1	5.6	Copper earth plate electrode:				
		Earthing with copper earth plate 600mm x 600mm x 3mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (with charcoal or coke and salt) as required.	Set	4		
2.2	5.14	P/F 25mm X 5mm copper earth strip in surface/ recess				
		Providing and fixing 25mm X 5mm copper strip on surface or in recess for connections etc. as required.	Meter	80		

Sr.No.	DSR Item	Description	Unit	Qty.	Rate	Amount
2.3	5.1	P/F 25mm X 5mm copper earth strip in pipe:				
		Providing and fixing 25mm X 5mm copper strip in 40 mm dia GI pipe from earth electrode, as required.	Meter	30		
			SubHead			
	Sub Head: 3	Fans & Fittings				
3.0	N.S.	Supply and installation of following luminaires comprising of electronic ballast with power factor ≥ 0.95 and THD $< 10\%$ complete with click fix lamp holders made out of ABS to impart strength including all control and internal wiring & hanging arrangement with G.I. chain - Fastners etc. as required for recess mounted fittings from approved manufacturers.				
	N.S.	Surface mounted decorative luminaire to match Philips Catalogue No. FCS 350/136 M1 HF with 1 x 36 Watt PLL CFL or approved equivalent make.	Each	14		
3.1	N.S.	Recess mounted 2x36 Watt CFL decorative wide spread mirror optic luminaire having glare control with OLC technology to match Philips Catalogue No. FBS 450/236 D6 HF or approved equivalent make complete with 2 Nos. PLL 36 Watt CFL lamp.	Each	25		
	N.S.	Exhaust fan Heavy duty				
	(A)	380mm 1400 RPM with louvers of Crompton / Bajaj/ Usha make	Each	6		
			SubHead			
	Sub Head: 4	Computer Point				
4.1	N.S.	Providing and fixing computer outlet (RJ-45) in M.S. flush box complete with all accessories connection etc. complete as required as per Legrand catalogue No. 689007, 74280, 674551 or approved equivalent.	Each	7		
4.2	N.S.	Providing and fixing wiring for LAN cable coaxial copper conductor cable (CAT-6 (E)) in existing conduit with all accessories connection etc. as per Legrand catalogue No. 032755 or approved equivalent.	Meter	140		
			SubHead			
	Sub Head: 5	Telephone Point				
5.1	N.S.	Supply, fixing, testing and commissioning of telephone cable 2 pair unarmored type in existing conduit complete with termination at both end.	Meter	50		
5.2	N.S.	Supply and installation of telephone outlets with spring shutter door suitable for terminating telephone cables including face plate with modular jack outlet colored snap-in-icon tab complete as required.	Each	2		
			SubHead			
			Total			

<u>PRICE BID</u> <u>AIR CONDITIONING / FIRE</u> <u>GMSD CHENNAI</u>		
Sub Head No.	ITEM/ WORKS	TOTAL AMOUNT OF WORKS AS PER BOQ (IN RS.)
1	AIR CONDITIONING	
2	FIRE FIGHTING	
	TOTAL (IN FIGURES)	
	TOTAL (IN WORDS)	

Schedule of Quantities AIR CONDITIONING / FIRE GMSD CHENNAI						
Item No.	DSR. No.	Description of Items	Qty.	Unit	Market Rate / Non DSR (Rs.)	Non DSR Amount (Rs.)
SubHead: 1		AIR CONDITIONING				
1.1	N.S	Providing & fixing 2 Ton high wall Split with remote complete with indoor & outdoor unit & necessary refrigerant insulated Copper piping, interconnecting power & control cable, Voltage regulator etc. & insulated PVC drain pipe complete in all respect of approved make.	4	Each		
1.2	N.S	Providing & fixing 1.5 Ton high wall Split with remote complete with indoor & outdoor unit & necessary refrigerant insulated Copper piping, interconnecting power & control cable, Voltage regulator etc. & insulated PVC drain pipe complete in all respect of approved make.	1	Each		
					SubHead Total	
SubHead: 2		FIRE FIGHTING				
2.1	N.S	Providing and fixing ABC-HFC-236 clean Agent stored pressure type, having 4 Kg capacity of Cease Fire or any other approved equivalent make Fire Extinguisher as per detail below:- The Fire Fighting content is to be HFC-236 Gas based. Quality of Sheet- Cold Rolled Cold Annealed (EDD Grade) M.S.Sheet (thickness 1.8 mm) it should have following Chemical & Physical Properties - Carbon - 0.08% Maximum, Magnese 0.40% maximum, Sulphur - 0.03% maximum , Phosphorous-0.03% maximum, Tensile Strength-270-350Mpa., Yield Stress-220 MPa Max Elongation-32% minimum Hardness-50 HR Material of Contraction of FE: CRCA Steel for Cylinder, Brass Assembly made out of Extrusion Brass, EPDM Hose Pipe and EPDM O Rings should only be used. Weight - Gross Wt. 6.9kg, Empty Wt.: 2.9kg Height - 435mm & Diameter : 140mm Discharge : Throw Range - 2.4mtrs, Discharge Time : less than 9 seconds. Manufacturing Process: Cylinder should be made with Deep Drawn Process with no vertical Joint and be welded using Mig CO2 Argon Welding process. Cylinder Surface Treatment : They should be coated with Zink Phosphate and Epoxy Powder Coating Inside & outside with Post office RED, Shade no 538, IS-5:1978 Leakage Test : All the Cylinders should be Helium Leakage Test with Certificate of Mass Spectrometer Helium Leakage Detection Test with the SI. No. Mentioned on the Certificate. Pressure Gauge - Should be international Magnetic Pressure Gauge preferably imported from Germany. Special Feature: Insta Alert Inbuilt 85 Decibels Fire Alarm FIRE Rating : 8A, 55B Certifications : CE & ISO 9001 Certified. The Fire Estinguisher is to be supplied with 100% free replacement for 5 years in case of default.				
2.2	N.S	Supply, Installation, Testing and Commissioning of Networkable Four Zone 4 PIPE Aspirating type Smoke Detector capable of covering upto 2000 sq. mtrs. similar to with Fire and Fault LEDs, necessary power supply unit and all mounting accessories and alarms as suitable for site installation complete as per the technical specifications of the tender documents and Drawings. Detector shall be UL Listed / FM approved	1	L.S		
2.3	N.S	Supply, Installation, Testing and Commissioning of Air Sampling Pipe (PVC Smooth bore Conduit - 21mm Internal Dia & 25mm Outer Dia.) with all mounting accessories like bends, joints, junctions etc as suitable for site installation complete as per the technical specifications of the tender documents and drawings suitable for above area complete in all respect as required	1	L.S		
					SubHead Total	