

BILL OF QUANTITY

Design, Supply, installation, testing and commissioning of fire fighting system and gas suppression system in existing old building at appropriate place at NID Campus, Ahmedabad and Gandhinagar
NIT No.: NID/04/2022-23

SUMMARY

SL.NO.	DESCRIPTION	AMOUNT AS PER BOQ (Rs)
1	Part - A NID Ahmedabad	
A	Fire Extinguishers - NID Paldi Ahmedabad	
B	Annual Maintenance Contract For proposed Fire Fighting System. - NID Paldi Ahmedabad	
C	Annual Maintenance Contract For Existing Fire System. - NID Paldi Ahmedabad	
D	Annual Maintenance Contract For Existing Fire Alarm And Smoke Detection System. - NID Paldi Ahmedabad	
2	Part - B NID Gandhinagar	
A	Fire Fighting System - NID Gandhinagar	
B	Annual Maintenance Contract For proposed Fire Fighting System. - NID Gandhinagar	
C	Annual Maintenance Contract For Existing Fire System. - NID Gandhinagar	
D	Proposed Fire Alarm And Smoke Detection System. - NID Gandhinagar	
E	Annual Maintenance Contract For Existing Fire Alarm And Smoke Detection System. - NID Gandhinagar	
	Grand Total I (Inclusive of all Taxes, duties etc.)= (PART A + PART B)	

Part - A NID Ahmedabad

A	Fire Extinguishers - NID Paldi Ahmedabad	Qty.	Unit	Rate	Amount(Rs.)
1.0	Providing and fixing, of CO2 High Pressure Portable 4.5 kg Fire Extinguisher, filled with Co2 Gas as per IS 15222 Gross Weight 16.4, empty weight 11.9 Kg, Control discharge mechanism fitted with 1 Meter Wire Braided Hose & Flat Horn with Diffuser Nozzle for dispersed discharge of CO2, Discharge Time 12 Sec, Average Discharge is 95%, Applicable on Class B, C and electrically started Fire, Fire Rating 55B, Internal coating is not applicable & External coating is of enamel spray painting, Powder Coated Handle, Squeeze Grip type Valve Confirm to IS 3224 ISI Marked, CO2 Cylinder construction: hot spinning by seamless pipes & bearing ISI mark, Body confirms to IS 7285 and PESO APPROVED, Extinguishers confirmed to IS 15683:2018 and ISI marked.	31	Nos.		
2.0	Providing and fixing of Water type cartridge operated 9 ltr. Fire Extinguisher. Applicable fire class A,UTGS Pressure Gauge, Gross Weight 13 Kg, empty weight 5.3 Kg, Can Height 585mm, Diameter 180 ± 10mm, Discharge Time 35 Sec, Controllable discharge mechanism, Jet Range 7 Meters, Average Discharge is 95%, Fire Rating- 3A, Can Construction : Deep drawn & CO2 Mig welded, CE Marked Valve with inbuilt NRV & Safety Release Provision, Controllable discharge mechanism with EPDM Hose & Nozzle, CO2 gas Cartridge of 60 gm. Internal Plastic Lining and External Coating - Pure Polyester Powder coating (UV Resistant), Made up of 2 mm Sheet, As per IS 5683:2018 and ISI Marked	35	Nos.		
3.0	Providing and fixing, of CAFS 50 ltr. Trolley System , Smooth and polished stainless steel body, 6% AFFF Foam, 6 Lit X 300 Bar Seamless Steel Air cylinder (PESO Approved), Constant working pressure 12-15 bar (dynamic), Gross weight 95 kg (Approx.), Empty weight 45 Kg (Approx.), Can Height 1120mm Approx., diameter 300±10mm, Discharge Time 125 sec (wet) 270 sec (dry), Length of hose 5 meters, Range 12-13 meters (Wet) & 11-12 meters (Dry), can work +5 ° C to +60 ° C, Flow rate 0.4 ltr/sec in wet operations and 0.2 ltr/sec in dry operations, Fire Rating Class 55 A & IVB fires, CE Certified complete as per specification	2	Nos.		
4.0	Providing, fixing, testing and commissioning of below Auto Glow Signages.				
4.1	Fire Extinguisher 8"x 8"	70	Nos.		
Total Amount of Fire Fihgting System					-
B Annual Maintenance Contract For proposed Fire Fighting System. - NID Paldi Ahmedabad					
5.0	<p>Non Comprehensive Quarterly Maintenance service charge for Fire Fighting System including servicing of fire fighting system with cleaning ,oiling and Greasing of fire fighting equipment's, give live demonstrations And performing live mock drill once in a year of the system after completion of DLP.</p> <p>Quarterly servicing and maintenance will be done for Fire Fighting systems.</p> <p>a) To check & Maintain the Fire Fighting System as per Installation done.</p> <p>b) Checking of Butterfly valve , NRV, Ball valve for smooth operation.</p> <p>c) Checking of Fire Brigade Inlet.</p> <p>d) Visually check of Sprinklers for Leakage.</p> <p>e) Fire Extinguisher to be checked physically.</p> <p>f) Testing of Main Pump, Sprinkler Pump & Jockey Pump, Fire Panel.</p> <p>g) Physical checking of each Fire fighting Equipment's. (Like Hydrant Valve , Hose Reel,Hose Box , Hose pipe And Branch Pipe etc..)</p> <p>h) Checking of Pump room in active working condition.</p> <p>I) Refilling of Fire Extinguisher will be in contractor scope as per client requirements.</p> <p>J) Including Charges for fire New / Renewal NOC, for Fire Fighting System.</p> <p>K) Videography , Photo graphy , numburing & Pendrive etc. as per norms for New / Renewal NOC.</p>				
5.1	First Year	1	Job		
5.2	Second Year	1	Job		
5.3	Third Year	1	Job		
Total Amount of Non Comprehensive Maintenance Of Proposed Fire System					-

C Annual Maintenance Contract For Existing Fire System. - NID Paldi Ahmedabad					
6	<p>Non Comprehensive Quarterly Maintenance service charge for Existing Fire System / Gas suppression system including servicing of fire fighting system with cleaning ,oiling and Greasing of fire fighting equipment's, give live demonstrations And performing live mock drill once in a year of the system.</p> <p>Quarterly servicing and maintenance will be done for Fire Fighting systems.</p> <p>a) To check & Maintain the existing Fire System / Gas suppression as per Installation done at site.</p> <p>b) Checking of Butterfly valve , NRV, Ball valve , solenoid valve , etc... for smooth operation.</p> <p>c) Fire Extinguisher to be checked physically.</p> <p>d) Hydro Test And Refilling of Existing Fire Extinguisher will be in contractor scope as per client requirements and paid to contractor as per actual cost & conform by NID.</p> <p>(Note:- approximately Qty. Of Existing Fire Extinguisher Is given below)</p> <p>1. ABC Type Fire Extinguisher's 2 Kg. - 48 Nos.</p> <p>2. ABC Type Fire Extinguisher's 4 Kg. - 09 Nos.</p> <p>3. ABC Type Fire Extinguisher's 5 Kg. - 13 Nos.</p> <p>4. CO2 Type Fire Extinguisher's 4.5 Kg. - 17 Nos.</p>				
6.1	First Year	1	Job		
6.2	Second Year	1	Job		
6.3	Third Year	1	Job		
6.4	Forth Year	1	Job		
Total Amount of Non Comprehensive Maintenance Of Existing Fire System					-
D Annual Maintenance Contract For Existing Fire Alarm And Smoke Detection System. - NID Paldi Ahmedabad					
7	<p>Quarterly Non Comprehensive Maintenance for installed fire alarm systems in library block, auditorium, design room and IT department at site location. This shall include all kind of technical fault identification & rectification, troubleshooting of system and making system up & working at its best performance level. The bidder are requested to visit site to understand current situation of installed fire alarm systems for mentioned building blocks.</p> <p>Note: NID shall provide any kind new products i.e. cables, detectors, MCP, hooters, panels and batteries if they are found non-performing and non-repairable. The bidder has to submit proper technical report along with faulty product to NID.</p>				
7.1	First Year	1	Job		
7.2	Second Year	1	Job		
7.3	Third Year	1	Job		
7.4	Forth Year	1	Job		
Total Amount of Non Comprehensive Maintenance Of Existing Fire System					-

Part - B NID Gandhinagar

A Fire Fighting System - NID Gandhinagar					
1.0	<p>Providing & fixing of CO2 High Pressure trolley mounted 6.5 kg Fire Extinguisher, filled with Co2 Gas as per IS 15222, Gross Weight 23 Kg, empty weight 16.5 Kg, Control discharge mechanism fitted with 2 Meter Wire Braided Hose & Flat Horn with Diffuser Nozzle for dispersed discharge of CO2, Discharge Time 25 Sec, Average Discharge is 95%, applicable on Class B, C and electrically started Fire, Internal coating is not applicable & External coating is of enamel spray painting, Valve Confirm to IS 3224 ISI Marked, CO2 Cylinder construction: hot spinning by seamless pipes & bearing ISI mark, Body confirms to IS 7285 and PESO APPROVED, Extinguishers confirmed to IS 16018:2012 and ISI maked. Fire Rating: 55B</p>	1	Nos.		
2.0	<p>Providing and fixing, of CO2 High Pressure Portable 4.5 kg Fire Extinguisher, filled with Co2 Gas as per IS 15222 Gross Weight 16.4, empty weight 11.9 Kg, Control discharge mechanism fitted with 1 Meter Wire Braided Hose & Flat Horn with Diffuser Nozzle for dispersed discharge of CO2, Discharge Time 12 Sec, Average Discharge is 95%, Applicable on Class B, C and electrically started Fire, Fire Rating 55B, Internal coating is not applicable & External coating is of enamel spray painting, Powder Coated Handle, Squeeze Grip type Valve Confirm to IS 3224 ISI Marked, CO2 Cylinder construction: hot spinning by seamless pipes & bearing ISI mark, Body confirms to IS 7285 and PESO APPROVED, Extinguishers confirmed to IS 15683:2018 and ISI marked.</p>	19	Nos.		

3.0	Providing and fixing of Water type cartridge operated 9 ltr. Fire Extinguisher. Applicable fire class A,UTGS Pressure Gauge, Gross Weight 13 Kg, empty weight 5.3 Kg, Can Height 585mm, Diameter 180 ± 10mm, Discharge Time 35 Sec, Controllable discharge mechanism, Jet Range 7 Meters, Average Discharge is 95%, Fire Rating- 3A, Can Construction : Deep drawn & CO2 Mig welded, CE Marked Valve with inbuilt NRV & Safety Release Provision, Controllable discharge mechanism with EPDM Hose & Nozzle, CO2 gas Cartridge of 60 gm. Internal Plastic Lining and External Coating - Pure Polyester Powder coating (UV Resistant), Made up of 2 mm Sheet, As per IS 5683:2018 and ISI Marked	2	Nos.		
4.0	Providing and fixing, of CAFS 50 ltr. Trolley System , Smooth and polished stainless steel body, 6% AFFF Foam, 6 Lit X 300 Bar Seamless Steel Air cylinder (PESO Approved), Constant working pressure 12-15 bar (dynamic), Gross weight 95 kg (Approx.), Empty weight 45 Kg (Approx.), Can Height 1120mm Approx., diameter 300±10mm, Discharge Time 125 sec (wet) 270 sec (dry), Length of hose 5 meters, Range 12-13 meters (Wet) & 11-12 meters (Dry), can work +5 ° C to +60 ° C, Flow rate 0.4 ltr/sec in wet operations and 0.2 ltr/sec in dry operations, Fire Rating Class 55 A & IVB fires, CE Certified complete as per specification	3	Nos.		
5.0	Clean Agent GAS SUPPRESSION SYSTEM (Approx. Size of Main Server Rooms No 1 :- As per drawing attached in technical specification) Design, supply, installation, testing and commissioning of CCOE Approved Seamless Novec 1230/FK-5-1-12 Cylinder and PESO approved Valve Assembly, OEM Factory filled with Novec 1230/FK-5-1-12 Suppression Liquid , pressurised to 50 bar. Kit complete with Solenoid, Pneumatic actuators, Pressure Gauge, Low pressure supervisory switch, Discharge hoses, Flexible actuation hoses and connectors to complete the system, Including UL or Vds Listed Nozzles, VdS or UL Manifold Check Valve, Piping as required, Sch 40, ASTM A106 Gr B, Wall mount kit or Floor Mount Rack, Warning Signages "Do Not Enter" or "Exit-Gas Released" working on 24V DC power supply, Conventional Hooter, Single zone Gas Release Panel , Manual release switch, Abort switch- VDS or UL Listed. Bidder to take actual dimension of server room during site visit.	1	Job		
6.0	Clean Agent GAS SUPPRESSION SYSTEM (Approx. Size of Main Server Rooms No 2 :- As per drawing attached in technical specification) Design, supply, installation, testing and commissioning of CCOE Approved Seamless Novec 1230/FK-5-1-12 Cylinder and PESO approved Valve Assembly, OEM Factory filled with Novec 1230/FK-5-1-12 Suppression Liquid , pressurised to 50 bar. Kit complete with Solenoid, Pneumatic actuators, Pressure Gauge, Low pressure supervisory switch, Discharge hoses, Flexible actuation hoses and connectors to complete the system, Including UL or Vds Listed Nozzles, VdS or UL Manifold Check Valve, Piping as required, Sch 40, ASTM A106 Gr B, Wall mount kit or Floor Mount Rack, Warning Signages "Do Not Enter" or "Exit-Gas Released" working on 24V DC power supply, Conventional Hooter, Single zone Gas Release Panel , Manual release switch, Abort switch- VDS or UL Listed. Bidder to take actual dimension of server room during site visit.	1	Job		
	Hydrant System piping & Accessories				
7.0	Supplying, Installation, Testing and commissioning of Above Ground MS C Class Heavyduty pipes as per IS: 1239 (upto 150 mm dia.) and IS: 3589 (upto 200 mm dia. And above) including cutting, screwing, welding etc. and providing all fittings like flanges, bends, tees, elbows, reducers, clamps, hangers etc. with painting of one coat of primer and 2 or more coats of synthetic enamel paint of approved make / shade complete as per specification.				
7.1	100mm dia.	6	Meter		
7.2	80mm dia.	42	Meter		
7.3	25mm dia	6	Meter		
8.0	Supplying, Installation, Testing and commissioning of Under Ground MS C Class Heavyduty pipes as per IS: 1239 (upto 150 mm dia.) and IS: 3589 (upto 200 mm dia. And above) with IWL/pypecoat, 4mm thickness wrapping and coating and providing all fittings like flanges, tees, elbow, fasteners with all required.				
8.1	150mm dia.	6	Meter		
8.2	100mm dia.	294	Meter		
8.3	80mm dia.	18	Meter		
9.0	Supplying, Installation, Testing and commissioning C.I.Butterfly valve PN16 conforming to IS:13095/BS :5155 with Flanges,GI Nut bolts, Gaskets completed as required.				
9.1	100mm dia.	8	Nos.		
9.2	80mm dia.	1	Nos.		
10.0	Supplying, Installation, Testing and commissioning of SS Single Headed Oblique Pattern Hydrant Landing Valves as per IS: 5290 with 80 mm dia flanged inlet & 63 mm dia female outlet complete with cap and chain etc.	13	Nos.		
11.0	Supplying, Installation, Testing and commissioning of SS Branch Pipe with nozzle of 25 mm nominal bore outlet suitable to fit with standard instantaneous type 63 mm dia coupling. As per IS:903	19	Nos.		

12.0	Supplying, Installation, Testing and commissioning of 63 mm dia 15m long RRL Hose Pipe with 63 mm dia.Type A Male and female Stainless Steel couplings duly binded with GI wire, rivets etc. conforming to IS 636 as required.	19	Nos.		
13.0	Supplying, Installation, Testing and commissioning of weather proof standard fire Hose Cabinet wall mounting type 16 Guage. (450 x 600 x 250) having Single Opening with M.S. fabricated stand, necessary locking arrangement by allan key.	13	Nos.		
14.0	Supplying, Installation, Testing and commissioning of Wall mounting Fix type First aid Fire Hose Reel with drum, hanging bracket, 36.5 M x 25 mm dia high pressure hose reel tubing as per IS:884 with shut nozzle and ball valve and all required accessories.	13	Nos.		
15.0	Supplying, Installation, Testing and commissioning of 25 mm dia Air Release Valve and Ball Valve assembly on top of each riser for Air release system.	3	Nos.		
16.0	Supply, installation, testing and commissioning of Cast Iron Two Way Fire Brigade Inlet as per IS:904 having 63 mm dia inlet with blank cap and chain with necessary fittings, flanges, nut bolts etc. complete as required. (For Tank Filling)	1	No.		
17.0	Providing and fixing of Steel structure supports (MS Angle, MS Channle, MS Flat Plat)	1200	Kg.		
18.0	Providing, fixing, testing and commissioning of below Auto Glow Signages.				
18.1	Exit 4" x 12"	12	Nos.		
18.2	Fire Equipment's 4" X 12"	12	Nos.		
18.3	Fire Extinguisher 8"x 8"	26	Nos.		
Total Amount of Fire Fighting System					-
B	Annual Maintenance Contract For proposed Fire Fighting System. - NID Gandhinagar				
19.0	<p>Non Comprehensive Quarterly Maintenance service charge for Fire Fighting System including servicing of fire fighting system with cleaning ,oiling and Greasing of fire fighting equipment's, give live demonstrations And performing live mock drill once in a year of the system after completion of 1 year DLP.</p> <p>Quarterly servicing and maintenance will be done for Fire Fighting systems.</p> <p>a) To check & Maintain the Fire Fighting System as per Installation done.</p> <p>b) Checking of Butterfly valve , NRV, Ball valve for smooth operation.</p> <p>c) Checking of Fire Brigade Inlet.</p> <p>d) Visually check of Sprinklers for Leakage.</p> <p>e) Fire Extinguisher to be checked physically.</p> <p>f) Testing of Main Pump, Sprinkler Pump & Jockey Pump, Fire Panel.</p> <p>g) Physical checking of each Fire fighting Equipment's. (Like Hydrant Valve , Hose Reel,Hose Box , Hose pipe And Branch Pipe etc..)</p> <p>h) Checking of Pump room in active working condition.</p> <p>I) Refilling of Fire Extinguisher will be in contractor scope as per client requirements.</p> <p>J) Including Charges for fire New / Renewal NOC, for proposed / existing Fire Fighting System.</p> <p>K) Videography , Photo graphy , numburing & Pendrive etc. as per norms for New / Renewal NOC.</p>				
19.1	First Year	1	Job		
19.2	Second Year	1	Job		
19.3	Third Year	1	Job		
Total Amount of Non Comprehensive Maintenance proposed fire system					-
C	Annual Maintenance Contract For Existing Fire System. - NID Gandhinagar				
20.0	<p>Non Comprehensive Quarterly Maintenance service charge for Existing Fire Fighting System including servicing of fire fighting system with cleaning ,oiling and Greasing of fire fighting equipment's, give live demonstrations And performing live mock drill once in a year of the system.</p> <p>Quarterly servicing and maintenance will be done for Fire Fighting systems.</p> <p>a) To check & Maintain the existing Fire System as per Installation done at site.</p> <p>b) Checking of Butterfly valve , NRV, Ball valve for smooth operation.</p> <p>c) Checking of Fire Brigade Inlet.</p> <p>d) Visually check of Sprinklers for Leakage.</p> <p>e) Fire Extinguisher to be checked physically.</p> <p>f) Testing of Main Pump, Sprinkler Pump & Jockey Pump, Fire Panel.</p> <p>g) Physical checking of each Fire fighting Equipment's. (Like Hydrant Valve , Hose Reel, Hose Box , Hose pipe And Branch Pipe etc..)</p> <p>h) Checking of Pump room in active working condition.</p> <p>I) Hydro Test And Refilling of Existing Fire Extinguisher will be in contractor scope as per client requirements and paid to contractor as per actual cost & confurm by NID.</p> <p>(Note:- approximately Qty. Of Existing Fire Extinguisher Is given below)</p> <p>1. ABC Type Fire Extinguisher's 1 Kg. - 02 Nos.</p> <p>2. ABC Type Fire Extinguisher's 2 Kg. - 12 Nos.</p> <p>3. ABC Type Fire Extinguisher's 4 Kg. - 25 Nos.</p> <p>4. ABC Type Fire Extinguisher's 6 Kg. - 09 Nos.</p> <p>5. DCP Type Fire Extinguisher's 5 Kg. - 01 Nos.</p>				

20.1	First Year	1	Job		
20.2	Second Year	1	Job		
20.3	Third Year	1	Job		
20.4	Forth Year	1	Job		
Total Amount of Non Comprehensive Maintenance Of existing fire system					-
D	Proposed Fire Alarm And Smoke Detection System. - NID Gandhinagar				
21.0	Design,Supply,Installation,Testing & Commissioning of 2 zone Conventional Fire Alarm Control Panel.	2	Nos		
22.0	Design,Supply,Installation,Testing & Commissioning of Conventional Multi Sensor Detector.	20	Nos		
23.0	Design,Supply,Installation,Testing & Commissioning of Conventional Beam Detector.	1	Nos		
24.0	Design,Supply,Installation,Testing & Commissioning of Conventional Manual Call Point.	4	Nos		
25.0	Design,Supply,Installation,Testing & Commissioning of Conventional Hooter cum Strobe.	4	Nos		
26.0	Supply & Layng of 2C X 1.5 SQMM Flexible Cable With PVC Conduit.	700	Mtr		
27.0	<p>Quarterly Non Comprehensive Maintenance for above fire alarm system installed at site location. This shall include all kind of technical fault identification & rectification, troubleshooting of system and making system up & working at its best performance leve after 1 year DLP.</p> <p>Note: NID shall provide any kind new products i.e. cables, detectors, MCP, hooters, panels and batteries if they are found non-performing and non-repairable. The bidder has to submit proper technical report along with faulty product to NID.</p>				
27.1	First Year	1	Job		
27.2	Second Year	1	Job		
27.3	Third Year	1	Job		
Total Amount of Proposed Fire Alarm And Smoke Detection System.					-
E	Annual Maintenance Contract For Existing Fire Alarm And Smoke Detection System. - NID Gandhinagar				
28.0	<p>Quarterly Non Comprehensive Maintenance for installed fire alarm system in Auditorium at site location. This shall include all kind of technical fault identification & rectification, troubleshooting of system and making system up & working at its best performance level. The bidder are requested to visit site to understand current situation of installed fire alarm system for mentioned building block.</p> <p>Note: NID shall provide any kind new products i.e. cables, detectors, MCP, hooters, panels and batteries if they are found non-performing and non-repairable. The bidder has to submit proper technical report along with faulty product to NID.</p>				
28.1	First Year	1	Job		
28.2	Second Year	1	Job		
28.3	Third Year	1	Job		
28.4	Forth Year	1	Job		
Total Amount of Existing Fire Alarm And Smoke Detection System.					-