

**Request for Proposal for Installation of Integrated
Security System at National Defence College,
New Delhi**

(Tender Enquiry)

Request for Proposal (RFP) No.16/2013

No.A/48932/ISS/CAO/MP-III

Government of India

Ministry of Defence

Office of JS (Trg) & CAO

E-Block Hutments, Dalhausie Road,

New Delhi – 110011

Dated : 27 Dec 2013

The JS(Trg) & Chief Administrative Officer, Ministry of Defence, New Delhi, for and on behalf of the President of India, herein after called the “Government” invites to tender on Two-Bid system for Installation and Commissioning of security related systems of Access Control and Surveillance at National Defence College (NDC), New Delhi.

2. General information about the tender is as follows:-

- | | |
|--|---|
| (a) Tender No. | - RFP/16/2013 |
| (b) Time, date & Place for pre-bid conference | - 10 Jan 2014 at 1100 Hrs
Conference Hall
O/o JS(Trg) & CAO |
| (c) Last date & time for Sale of Bid documents | - 30 Jan 2014 upto 1330 Hrs |
| (d) Last date and time for receipt of Tenders | - 31 Jan 2014 upto 1300 Hrs |
| (e) Date, time and place of opening of Tenders | - 31 Jan 2013 at 1500 Hrs
Conference Hall
O/o JS(Trg) & CAO
E-Block, New Delhi |
| (f) Address for communication | - Dy Director/MM-II
O/o JS (Trg) & CAO
Room No.55, E-Block
New Delhi – 110011 |

3. The details about the tender terms and conditions and other related information is given in the appropriate chapters as below:-

- Chapter-1: - General Instructions to Bidders**
- Chapter-2: - Technical Details**
- Chapter-3: - Standard Conditions of RFP**
- Chapter-4: - Special Conditions of RFP**
- Chapter-5: - Evaluation Criteria & Commercial Bid Format**

4. This RFP is being issued with no financial commitment and the Buyer reserves the right to change or vary any part thereof at any stage. Buyer also reserves the right to withdraw the RFP, should it become necessary at any stage.

Chapter-1

GENERAL INSTURCTIONS TO BIDDERS

1. The Bid documents can be obtained against a written request from the following address on any working day between 1030 Hrs to 1330 Hrs upto 30 Jan 2014 on payment of Rs.1,000/- (non- refundable) in the form of a Demand Draft/Banker's Cheque in favour of **“JS(Trg) & CAO, Ministry of Defence”** payable at Delhi/New Delhi :

Dy Director/MM-II
Room No.55
O/o JS(Trg) & CAO
E-Block Hutments
Dalhousie Road
New Delhi – 110011

The Tender documents can also be downloaded from the website of this office www.caomod.nic.in or www.caomod.gov.in. Application submitted in the downloaded version should be accompanied by Demand Draft/Banker's Cheque of Rs.1,000/- in favour of **“JS(Trg) & CAO, Ministry of Defence”** payable at Delhi/New Delhi.

2. Brief Scope of Work

The project involves installation and integration of security components to include Access Control, Restricting and Monitoring movement of personnel, Vehicle Identification, Explosives Detection in Vehicles, Boom Barriers and Bollards. The appropriate “ system” shall allow for the integration of the aforementioned components, such that the management of all sub-systems resides within a single data-base application and can be managed by an appropriate `Administrator' from a control room.

3. Any clarification with regard to obtaining of bid documents may be obtained from Dy Director/MM-II on Tele No. 23014698.

4. Important Dates

Pre-bid Conference	: 10 Jan 2014 at 1100 Hrs
Sale of bid documents upto	: 30 Jan 2014 upto 1330 Hrs
Date of submission of bids	: 31 Jan 2014 upto 1300 Hrs
Opening of Technical bids	: 31 Jan 2014 upto 1500 Hrs

5. General Information

(a) Interested prospective bidders are advised to go through the Tender documents carefully before participating in the bid.

(b) Duly filled in Request for Proposal (RFP) received shall be evaluated on the basis of a criteria based on Qualitative Requirements, Scope of works, in terms of functional characteristics and only those qualifying the same shall be considered for the next stage of bidding process.

(c) The Ministry of Defence reserves the right to accept or reject any RFP bid and to annul the process and reject all RFP bids at any time without incurring any liability to the firms.

(d) Any wrong or misleading information will lead to disqualification.

(e) RFP bids received after due date and time will not be entertained.

6. The details of items and the quantity required along with their specifications are given in Chapter-2. **The tenderer shall have to arrange/ supply equipment for Installation and Commissioning of security related systems of Access Control and Surveillance strictly as per the technical specifications mentioned in Chapter-2.**

7. The 'Technical Bid Format of the Tender' is given in Chapter-2 and the tenderer should elucidate explicitly the technical specifications of the equipment to be supplied. **The tenderer should attach detailed data sheet of each product in support of the specifications mentioned in the RFP. The bidders are also required to submit a solution showing how the integration will be done vis-à-vis the qualitative requirement given in Part A of Chapter II of RFP. Tender documents not supported by the required solution as well as requisite data sheet as per the product specification are liable to be rejected.**

8. The 'Commercial Bid Format of the Tender' is given in Chapter-5. The bidders shall submit their commercial bid strictly as per the prescribed format. No other documents should be enclosed with Commercial Bid.

9. The tender documents complete in all respects duly sealed should reach the Office of the JS (Trg) & Chief Administrative Officer, Ministry of Defence, New Delhi not later than 31 Jan 2014 upto 1300 Hrs. **The required documents as mentioned at para 7 of this chapter along with Technical Bid as per format given in 'Chapter-2' of the RFP duly filled in and signed must be submitted in a separate sealed cover as 'Technical Bid of the Tender'. Another sealed cover should contain duly filled in and signed Commercial**

Bid as per format given in 'Chapter-5' of the RFP and should be superscribed 'Commercial Bid of the Tender'. Both the Technical Bid as well as Commercial Bid sealed in separate envelopes as stated above should be further sealed in another envelope and sent as described in the succeeding paragraph.

10. The tender must be addressed to Joint Secretary (Trg) & Chief Administrative Officer, Ministry of Defence, E Block, Dalhousie Road, New Delhi and **superscribed as 'TENDER FOR INTEGRATED SECURITY SYSTEM AT NDC'**. Tenders may be put in the tender box kept in the Reception Office at E Block, Dalhousie Road, New Delhi or sent by Registered Post so as to reach before the scheduled date and time. No responsibility will be taken for postal delay or non-delivery/non-receipt of tender documents. Telegraphic quotations will not be accepted under any circumstances. Tenders received after the stipulated time and date or incomplete in any respect shall not be considered and will be summarily rejected. Any amendment in technical/commercial bid, if required, shall be made legibly and signed by the tenderer. Conditional tenders will not be accepted.

11. Technical Bids will be opened by a committee at 1500 Hrs on 31 Jan 2014 in the office of the JS (Trg) & Chief Administrative officer, Ministry of Defence. Authorized representatives of the tenderers can attend tender opening. If due to any exigency, the due date for opening of tenders is declared as closed holiday, the tender will be opened on next working day at the same time or any other day and time as intimated by the Government. Commercial bids will be opened only of those firms, whose technical bids are found to qualify technical evaluation and the date of opening of commercial bid will be intimated later, after acceptance of Technical Bids.

12. The tenderers are permitted to tender on the explicit understanding that they shall not be entitled to resile from their offer or modify the terms and conditions given herein once the same have been received by the JS (Trg) & Chief Administrative Officer, Min of Defence. If tender is withdrawn/amended or any further conditions are imposed by the tenderer, the earnest money deposited by the tenderer shall be forfeited without prejudice to any other remedies of the Government for such breach on the part of the tenderer.

13. Technical Bid and Commercial Bid should be signed by the Proprietor/Partner of the firm or by person who is duly authorized and legally competent to do so. A person signing the forms or any document forming part of the contract on behalf of the firm shall be deemed to have been duly authorized by the Proprietor/Partner of the firm and actions taken by such person in pursuance of this contract shall be deemed to have been performed by the Proprietor/Partner.

14. The tenderer shall deposit a sum of **Rs 10 lacs (Rs. Ten Lacs only) for tender as 'Bid Security' (earnest money)** in the form of Account Payee Demand Draft or Banker's Cheque or Fixed Deposit Receipt or Bank Guarantee from any of the Public Sector or Private Sector banks in favour of JS (Trg) &

CAO, MOD, New Delhi and forward the same along with Technical Bid. The earnest money of the successful tenderer will be returned after the receipt of performance security as called for in the contract. The earnest money of the unsuccessful tenderer will be returned before the 30th day after award of the contract. The earnest money shall not bear any interest.

15. Forfeiture of the Bid Security : The bid security/earnest money will be liable to be forfeited if the bidder withdraws or amends, impairs or derogates from the tender in any respect within the validity period of his tender. No separate order is required for forfeiture of Bid Security which follows on default and should be credited at once to Government Account.

16. Rejection of Bids: Canvassing by the Bidder in any form, unsolicited letter and post-tender correction may invoke summary rejection with forfeiture of EMD. Conditional tenders will be rejected.

17. Validity of bids: The bids shall remain valid for 120 days from the date of submission of the bids

Chapter-2

PART-A (User Requirement/Qualitative Requirements in terms of functional characteristics)

PART-B(Technical Specifications/Product Specifications and Technical Bid Format)

PART-A

1. Qualitative Requirements(QRs) for Installation Of Integrated Security System at NDC

i). **Surveillance and Monitoring of Vehicles** : All vehicles entering the building premises will be scanned and monitored. The Surveillance system will have the following features :

- (a) Identification of Registered and non-registered vehicles.
- (b) Hassle free entry to Registered vehicle by reading RFTags pasted on them.
- (c) Conditional Access for visitors vehicle.
- (d) Under Carriage scanning of vehicle for foreign bodies placed underneath.
- (e) *Hand Held Explosive Detector* for detection of any explosive in vehicle's body.
- (f) Capture and Storage of images of the driver of unregistered vehicle.
- (g) *Tracking of user vehicles in NCR Region through Local Server.*
- (h) Recording and report generation for details of duration of stay of vehicles, their registration No. etc.
- (j) Automatic activation of boom barriers and bollards when any vehicle tries to make forced entry.
- (k) Automatic & manual control alarm system.
- (m) Provision of having different levels of security depending upon the security threat perception.

ii). **Personnel Monitoring System**:

- (a) Provision of unique Access Card having biometric and/ or RF read facility.
- (b) Surveillance and recording of entry and exit of personnel in NDC premises and NDC building through various gates.

- (c) Video surveillance of all three gates, outer periphery, parking areas and corridors inside the building.
- (d) Electronic locking of the lecture hall with a view to strengthening the security of lecture hall.

iii). **Visitor's Management** : All visitors should be issued rewritable cards which can be read by RF readers placed at different locations inside the buildings. Other facilities shall include the following :

- (a) Automation of Reception Offices and equipping them for generating rewritable electronic cards which are location and time specific.
- (b) Storing time stamped images of visitors which can be retrieved when required.
- (c) Report generation.
- (d) Unobtrusive scanning of employee and visitors baggage for unauthorized equipment and explosives.

iv). **Monitoring and Control Room** :

Room with servers to integrate all inputs, display systems and alarm generation in case of any contingency.

v) **Power Back up and inbuilt redundancy for each hardware.** Provision for this feature may be in-built in the system.

(vi) The Integrated Security System shall be so designed that any failure of any sub-system shall not affect the normal operation of another sub-system, they shall continue to operate normally in a non-degraded mode.

(vii) The System Integrator/Firm submitting the Integrated Security System Application Software proposed for the project shall show proven operational record of such nature in their bid documents.

PART-B

Product Specification

01. IP Based Box Type Camera **Number Required: 28 Nos.**

Specification

<i>Indoor/Outdoor CS Mount/Dome as case may be Fixed Day/Night IP Camera with varifocal lens, outdoor housing with vandal proof mount</i>
<i>Latest Imager 1/3" Progressive Scan CCD/CMOS</i>
<i>Digital performance : Active Pixels (PAL) 1920 x 1080 (minimum)</i>
<i>Video standards Dual streaming H.264; M-JPEG</i>
<i>The camera shall have wide dynamic range and 18-bit or better advanced digital signal processing maximizes the Information visible in the picture even with strong backlighting.</i>
<i>The camera shall automatically detect the lens type.</i>
<i>The camera shall have smart BLC to compensate the image without compromising the dynamic range.</i>
<i>The camera shall have IR Filter which shall switch from color to monochrome automatically by sensing the illumination level.</i>
<i>In harsh lighting, the CCD/CMOS sensor in the camera shall generate two images; one long exposure to resolve details in the scene's darkest areas, and one short exposure to resolve details in the scene's brightest areas to get a clear picture.</i>
<i>The camera shall have privacy masking with minimum 3 privacy zones to allow the specific part of the screen to be blocked.</i>
<i>The built-in video motion detector shall allow to select a programmable area with individual thresholds</i>
<i>Analog performance : Color Resolution of 540 TVL</i>
<i>ONVIF (Open network Video Interface Forum) compliance shall ensure integration with third party management systems and video network devices.</i>
<i>The camera should have minimum Color Illumination of 0.5 lux for Color and upto 0.06 Lux for B/W for deliverance of video captured in very low luminous environment/ conditions.</i>
<i>The following video resolutions should be configurable by the operator/administrator for ease of viewing and reproduction :</i> <i>(a) View : 1920 x 1080 (Full HD)</i> <i>(b) Reproduction : 1280 x 720 (1.3 MP)</i>
<i>Overall Delay H.264, 120ms-240ms</i>
<i>PoE IEEE 802.3af compliant</i>

<i>Maximum Network Protocols such as :- RTP, UDP, TCP, IP HTTP, HTTPS, FTP, DHCP, IGMP, V2/V3, ICMP, ARP, SMTP, SNMP, 802.1 x UPnP</i>
<i>Video Data Rate 70 kbps to 7 Mbps / Channel</i>
<i>Network Connectivity 10/100 Base-T, auto-sensing, half/full duplex, RJ45</i>
<i>If the controlling PC equipped with the remote monitoring software fails, then the camera Encoder's built in web server should enable any PC on the network to monitor camera for mission critical application.</i>
<i>Alarm Input/Output 2/1</i>
<i>Audio 1 x mono line in, 1 x mono line out</i>
<i>Wide Focal Length of at least 3 to 8mm IR corrected auto IRIS control lens and 5 to 50 mm for corridors.</i>
<i>Electronic Shutter 1/30 to 1/10,000 sec, automatic.</i>
<i>Camera Settings On Screen Display for Camera programming</i>
<i>Camera ID : 17 Character Editable string</i>
<i>Video output 1Vpp</i>
<i>Signal/Noise Ratio > 50Db</i>
<i>AGC 21 dB</i>
<i>White Balance ATW (2700 – 6000K), AWB hold</i>
<i>Back light Compensation off/On</i>
<i>Housing Outdoor (IP 66) with in-built heater/blower and sunshield (should be of the same make of the camera)</i>
<i>CS type, Mounting Pole as per site requirement</i>
<i>Certification CE and UL Listed</i>
<i>Operating Temperature : -10°C to +50°C</i>
<i>Minimum Range : 50 Metres</i>
<i>Integration: Capable of Integration with the overall architecture of Integrated Security System (ISS).</i>

2 (a) IP Based High Speed Dome Type Camera (PTZ)

Number Required - 06 Nos.

Specification

<i>The 20X or better Day/Night camera module shall consist of an integrated high resolution CCD/CMOS camera using a 1/4-inch imager and a 4.3-118 mm auto-iris, auto-focus optical zoom lens; and variable high speed.</i>	
<i>ONVIF (Open Network Video Interface Forum) compliancy shall ensure integration with third party management systems and video network devices.</i>	
<i>The camera module shall be designed to perform over a wide range of environmental and lighting conditions with a horizontal resolution of 540 TVL (NTSC/PAL) and sensitivity down to 0.5 lux in color mode, and 0.06 lux in night mode.</i>	
<i>The camera shall automatically switch from daylight color operation to higher sensitivity nighttime monochrome mode when light levels fall below an adjustable threshold level.</i>	
<i>A full 10 or better digital zoom shall be functional once the maximum optical zoom limit has been reached.</i>	
<i>The camera shall be easily upgradeable.</i>	
<i>Video Standards</i>	<i>Dual stream H.264; M-JPEG simultaneously</i>
<i>Video Data Rate</i>	<i>9.6 Kbps – 6 Mbps Constant & variable</i>
<i>Video resolution</i>	<i>1920 x 1080 (Full HD 25/30 IPS) 1280 x 720 (1.3 MP : 25/30 IPS)</i>
<i>Network Protocols</i>	<i>RTP, Telnet, UDP, TCP, IP, HTTP, IGMP, ICMP</i>
<i>Configuration</i>	<i>Via web browser, built-in web server interfaces</i>
<i>Video output 1.0Vp-p+ 0.1Vp-p, 75 ohms</i>	
<i>Synchronization Line-lock (-120 ° to 120 ° vertical phase adjust) or internal crystal</i>	
<i>Signal to noise ratio Greater than 50 dB</i>	
<i>Pan Range 360° continuous</i>	
<i>Tilt Angle: 90° (minimum)</i>	
<i>Pre-position Speed</i>	<i>Pan 300°/s Tilt: 100°/s</i>
<i>It shall store up to 99 preset scenes</i>	
<i>It shall provide advanced alarm handling to manage up to seven (3) alarm inputs and four (4) alarm outputs</i>	
<i>Sectors/Titling 16 independent sectors with 20-character titles/sector</i>	
<i>Camera Setup/Control RS-232/RS-485</i>	
<i>Communications Protocols : Open & standard</i>	
<i>Guard Tours Two (2) types of tours: * Recorded tours – two (2), total duration 15 minutes * Preset tour – one (1), consisting of up to 99 scenes, consecutively and (1) customized up to 99 scenes.</i>	
<i>All housings shall come standard with a rugged impact-resistant</i>	

<i>polycarbonate bubble with pole mount adapter, vandal proof mount.</i>
<i>Camera housing shall be a NEMA 4 x or IP66 certified, rugged, weather resistant package with wall/pole mount as per requirement.</i>
<i>Outdoor Housing shall be made of cast aluminum for corrosion resistance, and supplied with a built-in heater/blower to provide an operating temperature range down to -5°C to +50°C</i>
<i>Humidity : 0% to 100% relative, condensing</i>
<i>Certification: UL & CE listed</i>
Minimum Range : 300 Metres
<i>Integration : Capable of Integration with the overall architecture of Surveillance & Access Control System</i>

02 (b). PTZ Camera Control Keyboard
Nos. Required: 01

01.	<i>When CCTV Keyboards are connected to Operator Client Workstations, it shall be possible to control PTZ operation of the selected cameras and to control set and call up PTZ prepositions of the selected camera using the keyboard joystick.</i>
02.	<i>When CCTV keyboards are connected to Operator Client Workstations, it shall be possible to control playback of video, including both instant playback and playback-mode synchronous playback using the CCTV keyboard</i>
03.	<i>When CCTV keyboards are connected to Operator Client Workstations, playback control should include jog-shuttle emulation using the Keyboard Joystick.</i>

02 (c) Network Attached Storage : Number Required :01

01.	<i>The Network attached Storage Array for recording of 34 cameras at 720p resolution 25 frames per second with hard disc of minimum 32 TB(Usable capacity)</i>
02.	<i>It shall be with RAID-0,1,5,6,10 protection as per the asked recording parameters</i>
03.	<i>It shall be configured with two (02) redundant 1 GbE network interfaces</i>

The IP Video Storage Array shall contain:

01.	<i>Intel ® Core 2 Duo E7400 (2.8GHz, 1066 MHz FSB, 3M L2 cache)</i>
02.	<i>Bandwidth: 200 Mbit/s</i>

Specification:

01.	<i>Input Voltage: 220VAC</i>
02.	<i>USB Ports: 3 USB 2.0; 2 in rear, 1 in front</i>

03.	Network: Dual Gigabit LAN
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03. (a) Workstation with 19” LED Screen
Number Required: 02 Nos.

Sr.No.	PARAMETER	SPECIFICATION
1	CPU	Intel Core I-7 processor (3.4 GHz, 8MB L2 Cache) or better
2	Mother Board	Intel C216 chipset.
3	Memory	8 GB DDR3 1600 with 4 DIMM slots
4	Hard Drives	500 GB SATA
5	DVD-R/W Drive	Write : 22X, Read : 16X
6	Keyboards	USB or PS/2 Keyboard
7	Mouse	USB Optical Mouse with scroll
8	Video Card	In Built
9	RAID	Supported
10	Network Adapter (NIC)	Integrated 10/100/1000 Base –T
11	Sound Card	High Definition Integrated Audio
12	Graphic Card 1GB	1GB DDR3 NVIDIA Graphics Card capable of minimum 1280 x 1024 pixel resolution with Dual monitor output support
13	DVD writer	DVD+16x –16x, RW +8x -6x, CDW 48x
14	Monitor	19” Flat LED Monitor
15	USB	2 nos. at front panel and 6 rear
16	Operating system	Microsoft Windows 7 Professional
17	Security	Pad Lock support, Kensington Lock support and Hood sensor support optional.
18	Power Supply	Minimum 300 W 90% efficiency power supply.

03 (b) VIDEO MANAGEMENT SERVER
Number Required : 01

Sr.No	Description
1	Intel Xeon E5-2600 Processor (3.0 GHz, 4 Core) or better
2	15MB Level 3 cache
3.	8 GB (4 x 2 GB) DDR3 DIMMs (1866 Mhz). Expandable upto 768 Gb with 24 DIMM slots
4	Embedded Dual Multifunction Gigabit NICs

5	Support Smart Array P420i Controller with 512MB BBWC (RAID 5). With an option of 1 GB FBWC also.
6	Support for Hot Plug Fully Redundant Power supply with 3 different power options available. HDD capacity will be 16TB.
7	HDD Capacity of 3 TB x 2 Nos.
8	64 Bit Licensed Operating system compatible with Video recording and Analytics software and anti-virus software should be quoted with the server
9	One internal TPM connector

04.

42" LED Screen

Number Required : 02 Nos.

S.No.	FEATURE	REQUIRED PARAMETERS
1	Type	LED
2	Size	42" Flat Screen at high resolution
3	Resolution	High Definition resolution of 1920 x 1080 pixels
4	Input	Composite video / AV/ VGA/HDMI
5	Contrast Ratio	10000: 01

05. Video Management Software Number Required : 01	
S. No.	Description
1	VMS shall be a highly scalable, enterprise level software solution.
2	It shall support single server architecture with support of 50 cameras in a CCTV system. It must offer a complete Video Surveillance solution that will be scalable.
3	The system MUST be capable of working on Windows 7 and Windows Server 2003 or above platforms.
4	The VMS should be a server client Architecture
5	The Software should be on Open Architecture Platform and should be compatible with at least 3 Different makes of cameras and encoders provided the cameras are also ONVIF compliant
6	The Software should comply to the ONVIF Standards completely (viewing, recording, management, Controlling, PTZ).
7	The VMS shall be loaded on the same server as the recording server. If a separate server for the VMs is required, then the same shall be considered at no additional cost. The software should also support NAS for recording and backup of video files.
8	Clients should be web based. If its application based, then bidder should provide user licenses for min. 20 users. (To be included in software cost itself)
9	The system should allow operation with PC keyboard or mouse. Once system is configured, virtual matrix functions can be carried out using CCTV keyboards
10	The VMS shall provide the following: Automatic search and registration of components of proposed system on the network. They can be Cameras, Monitors, Alarm panels, NVRs.
11	The system shall allow for live view, playback and system configuration of the IP video system.
12	The system shall allow for creation of multiple users and user groups and assign tasks to each.
13	Several simultaneous live picture connections of camera in network. It shall be capable of showing video pane layouts including 1x1, 2x2, 3x3, 4x4.
14	Hotspot Layout: Software shall support 1+3, 1+5, 1+7, 1+9 layout.
15	Software should support 16:9 and 4:3 format.
16	16:9 is required for HD cameras and software must support both the format.

17	<p><i>Software shall support edge based analytics and shall be able to support following analytic features:</i></p> <ul style="list-style-type: none"> • <i>Detect objects entering, leaving or just being within an area (detector field)</i> • <i>Detect loitering in an area related to radius and time</i> • <i>Detect idle objects within a configurable time span</i> • <i>Detect removed objects within a configurable time span</i> • <i>Detect condition change properties such as size, speed, direction and aspect ratio change within a specified item span (for example something falling down)</i> • <i>Detect trajectories/routes of objects, passing in the scene, displayed with tracking lines.</i> • <i>Alarm task script manager in the expert mode to combine tasks logically</i> • <i>Detect multiple lines crossing from single line up to three lines combined in a logical row.</i> • <i>Detect object that moves against a flow of objects</i> • <i>Detect flow of a constant moving object</i> • <i>Detect heads within a configurable area</i> • <i>Birds eye people counting (BEV)</i> • <i>Counting function of line crossing and fields</i> • <i>Enhanced tamper protection configuration</i> • <i>Enhanced tamper protection configuration</i> • <i>Enhanced algorithm</i> • <i>Assisted self calibration</i>
18.	<p>Following options to support</p> <p>It must be possible to establish audio connection on alarm.</p> <p>Programming of automatic recording events on NVR.</p> <p>System setup for pre-defined surveillance tasks to be invoked at pre-defined times in the day.</p> <p>Number of days of backup to be retained should also be possible to set from software.</p> <p>Multiple NVR should be configurable from client.</p> <p>Each category of alarm should be classified as severity of alarm, cause of alarm, and action required like email, auto reset. This should be possible for each alarm.</p> <p>Site Map: All connected cameras should be listed in a tree representation.</p> <p>Separate icon for speaker and microphone for direct control of audio IN and OUT.</p> <p>PTZ function shall be possible from keyboard as well. Arrow keys should be used to do pan and tilt the camera.</p> <p>Joystick control on GUI itself to do a PTZ control of cameras.</p> <p>Number of days of backup to be retained should also be possible to set from software.</p> <p>Backup schedule for the recorded video on a daily/weekly basis</p>

including time of start and date/time of end.
Brightness, contrast, sharpness, white balance can be set from the main GUI of software.
The VMS shall allow the following:
Live display of cameras
Live display of camera sequences, salvos and guard tours
Control of PTZ cameras
Custom Layout: User can program the layout as per his/her need/requirement.
Playback of archived Video at variable speed.
Retrieval of archived Video using normal playback, thumbnails (event or time based)
Configuration of system settings
Execution of Salvos, Guard Tour & sequences using tasks or manually
Search alarms based on type of alarm, type of source, date.
Instant playback of video on live video pane. Once the instant playback is over, software shall resume the live video from camera.
Software should support LDAP server addition for easy migration of data of users from LDAP server to VMS database.
Software must be capable of sending emails to the different users of CCTV system. Daily report shall be available on email to administrator.
For each camera set up bit rate, frame rate, and resolution shall be set independent of other cameras in the system. Altering the setting of one shall not affect the settings of other cameras.
The software shall have the provision of not less than 2 level MAP addition.
The software should support multi level maps so that each site, buildings, floors etc. can be located with the camera details on the map itself using *dwf formats*.
The software system shall be capable of handling camera and alarm icons on area maps. The area map shall be configurable to pop up upon the receipt of an alarm. This can be on the same or other monitors on the PC.
The software shall be capable of monitoring the status of camera in the network and shall indicate when a device goes offline by suitable **Icon**/red cross across the camera.
Software should support graphical representation of Alarms, storage status.
Report Generation: The software should be able to generate report from different sources:
a. Alarm sources
b. Camera status
c. HDD consumption of server
Video Search: The software should allow search based on time, date, and day.

<p>Search result display should happen in three ways:</p> <ol style="list-style-type: none">1. thumbnail2. Timeline3. List View <p>Analytics Integration: Alarms from analytics should get listed in the alarm list of VMS in real time.</p> <p>Software should provide the option of generating incident from various sources of alarms like network failure, video loss failure, analytics etc.</p>

06.

UTP CAT 6 CABLE
Quantity Required : 4000 mtrs

S.N.	Parameter	Item Description
1	CAT-6 /UTP Cable	4 Pair Cable, 23 AWG Copper with integral cross -member pair separator for uniform characteristic impedance.
		Standardization ISO/IEC 11801 2nd Ed.; IEC 61156-5 2nd Ed.; EN 50173-1; EN 50288-6-1;
		EIA/TIA 568B.2.1
		Cable overall diameter :Ø 6.3 mm.
		Should have tensile strength of 100N.
		The cable should have 100ohm impedance and data transmission frequencies up to 250MHz.
		It should be certified by independent test labs like 3P/Delta to meet Cat -6 Standards.

07. Optical Fiber Cable (OFC)

OFC- 06 Core Armoured
Quantity Required: 2000 mtrs

OFC	Specification
Optical Fiber Cable Buffered (Single Mode)	900µM Tight Buffered _ Internal / Duct grade _ Aramid Yarn Strength Member _ ULSZH Sheath _ E Glass Yarn – Rodent Resistant
Optical Fiber Cable (Single Mode)	CFR-00250 CFR-00240 n/a 6 Core

08.

Access Modular Controller
Number Required: 05 Nos.

Specification

(i) *The Access Modular Control (AMC) shall conform, but not limited to the following requirements and directives:*

- a. *FCC*
- b. *CE*
- c. *UL294*
- d. *EN 50130-4:1995*
- e. *EN 61000-3-2*
- f. *EN 6100-4-2*
- g. *EN 61000-4-4*
- h. *EN 61000-4-6*
- i. *EN 55022:1998*
- j. *EN 60950:2000*
- k. *EN 61000-3-3*
- l. *EN 61000-4-3*
- m. *EN 61000-4-5*
- n. *EN 61000-4-11*
- o. *EN 50131-1*

(ii) *The AMC shall be of modular design with a download software built-in so that the application program can be easily changed and downloaded without the physically touching the controller itself.*

(iii) *The AMC hardware design shall be of standard 19” rack mountable and also rail mountable for installation in an weather-proofed enclosure suitable for used in outdoor.*

(iv) *The connection from the AMC to the ISS server running the management software shall preferably by Ethernet 1000 Base T or RS-485.*

(v) ***The AMC shall have visual indicator for status or error indication.***

(vi) *The AMC shall support and include a standard Compact Flash (CF) memory card for storing cardholder data and access events. The CF memory card must be formatted with a standard FAT file system, to allow reading them using a standard card reader connected to a computer, if the AMC fails.*

(vii) *The AMC memory shall under no circumstance lose a single, not even the last transaction when power fails.*

(viii) *The AMC and all devices connected to it shall continue to operate and control access in off-line mode, even if the computer network fails.*

(ix) *The AMC memory shall store database that has a capacity with a minimum of 80,000 cardholders (upgradeable to 400,000), each having a programmable **10 digits** (personal Identification Number) PIN codes.*

(x) *The cardholder database shall be upgradeable by exchanging the CF card. The system shall automatically detect the size of the CF-card.*

(xi) *The AMC provided shall support the connectivity of up to 4 standard Wiegand interface readers or up to serial interface readers operating on RS 485 bus technology.*

(xii) *The AMC provided shall support multiple, but not limited to the following card formats:*

- a. *Wiegand 36 Bit (HID Corporate 1000)*
- b. *Wiegand 37 Bit (HID iClass)*

(xiii) *The AMC shall provide minimum eight programmable I/Os on board, and shall be expandable to 56 each, using I/O extensions.*

(xiv) *All inputs provided shall be configurable to provide 2- or 4- status selectable, via En-Of-line (EOL) resistors, namely:*

- a. *Input Closed*
- b. *Input Opened*
- c. *input Shorted (provided in 4- status mode)*
- d. *Input Tamper (Cable cut, provided in 4- status mode)*

(xv) *EOL resistor's values shall be flexible selectable in the ISS management software during configuration.*

(xvi) *UPS shall be provided to continually supply power to the AMC and readers for a minimum of 2-hours, in the event of power failure.*

(xvii) *The AMC shall generate a transaction record and save them in the memory for every alarm, they include:*

- a. *Time/date of occurrence and restoration.*
- b. *Location of alarm sensors.*

09.

Biometric/Smart Card Reader.

Number Required - 02 Nos.

Specification

- (i) The Smart CardReader shall be of ruggedized design, having weatherized polycarbonate enclosure or similar protection to withstand harsh environments for both indoor/outdoor used and provides a high degree of vandal resistance.*
- (ii) The Smart Card Reader shall provide two-factor authentication with the combination of a proximity [contactless smart] card and a fingerprint biometrics.*
- (iii) The Smart Card Reader together with the proximity [contactless smart] card shall support operation with 1:1 verification mode / identification mode.*
- (iv) The Smart Card Reader shall continue to operate to control access in off-line mode. When the network connection restored, the reader shall automatically upload and synchronize its database with the server.*
- (v) The Smart Card Reader shall include a FP scanner that uses capacitive verification techniques for the live finger recognition and resistance of the human skin.*
- (vi) The Smart Card Reader provided shall have a read tolerance of at least ± 30 degree and a displacement of about ± 5 mm from the FP scanner.*
- (vii) The same Smart Card Reader provided shall be able to be used for both access control and as an enrolment station.*
- (viii) The Tenderer shall supply and install the necessary software to manage the FP enrolment for all users and configuration of the FP access control operations. The software provided shall be integrated to the ISS for access control and monitoring.*
- (ix) During enrolment process, the Smart Card Reader and software used for capturing the finger-print shall provide, but not limited to the following:*
 - (a) The FP image shall have a minimum size of 256 x 360 pixels.*
 - (b) Provide full visibility of the ridge details including texture, continuity, edges and pores.*
 - (c) Allow for real-time on-screen preview of the FP image while performing the FP capture.*
 - (d) FP captured shall have resolution of at least 500dpi.*
 - (e) Minimum file size of at least 256 bytes.*

- (f) The FP enrolment process shall support a percentage estimation of the image quality such that the operator can accept or reject the enrolled FP.*
- (g) Not less than 02 (two) FP templates shall be allowed to be assigned to a single user.*
- (h) The enrolled FP templates shall be stored in the ISS centralized database as well as within the reader's memory storage.*
- (j) The FP templates stored shall incorporate a date stamp and shall record the number and/or name of the finger taken.*
- (k) The FP images captured shall be stored in an open format such as **jpeg** for the purpose to export for further use by another application when required.*
- (l) The card reader shall be based on contactless smart card 13.56MHz technology for connection to the AMC with Wiegand interface.*
- (m) The card reader provided shall be capable of reading CSN number in 32-bit format in accordance with ISO standard 14443 Series.*
- (n) The data transfer between the contactless smart card reader and smart card shall be encrypted.*
- (o) Power requirement: 10 – 16Vdc.*
- (p) The card reader shall have a read range of at least 3”.*
- (q) The response time to unlock the door after a card is presented to the card reader shall not exceed 1.0 second \pm 0.5 second.*
- (r) The card reader unit shall have an integral keypad with beeper, multi-colour LEDs.*
- (s) The keypad shall have back-light to allow easy viewing, in case of power blackout. It shall lights automatically upon pressing any key or when a card is presented to the reader.*
- (t) The overall thickness of the card reader unit shall not exceed 30mm.*
- (u) Certification : CE and UL Listed*

10. Smart Card.

(a) **Number Required** - 300 Nos.

Specification

<i>Smart Cards</i>	<i>Smart Card, CE&UL Approvals.</i>
	<i>The card should be non-clonable having a magnetic stripe, barcode, anti-counterfeiting feature, custom artwork, ability to store biometric templates, photos and useful data using read/write capabilities.</i>
	<i>On line reader facility. All transactions will be stored and displayed in real time at central location.</i>
	<i>Facility of multi-location data transfer through SSL.</i>
	<i>The card shall meet ISO 7810 specifications for length, width, thickness, flatness, card construction and durability, and shall be in a form suitable for direct two-sided dye-sublimation or thermal transfer printing on the specified badge printer.</i>
	<i>Read/write proximity smart card technology, providing high-speed, reliable communications with superior data integrity.</i>
	<i>Communications between card and reader that include high security with mutual authentication, encrypted data transfer, and 64 bit diversified keys for read/write.</i>
	<i>Advanced key management systems to reduce the risk of compromised data or duplicated cards.</i>
	<i>The ability to factor or field program of any existing format into the secure access control application area.</i>
	<i>The Smart cards shall operate on 13.56 MHz, and shall be compliant to ISO standard 14443 Series.</i>
<i>Operating Temperature</i>	<i>-5°C to +50°C</i>
<i>Integration</i>	<i>Capable of Integration with the overall architecture of Surveillance & Access Control System</i>
<i>Memory Size</i>	<i>32 KB</i>

11. Smart Card Reader
Number Required: 03 Nos.

Sr. No.	Parameters	Description
01.	Smart Card Reader is a contactless card reader which puts access control system from NC to NO mode when authentication through card is recorded	-Typical Reader Range:2.8";Operating Voltage Range:5-16 VDC;Current Draw:45mA;Operating Temperature: -35'C to 65'C;Storage Temperature:-55' to 85'C;Environmental rating:IP55;Transmit frequency:13.56 Mhz

12. Electromagnetic Lock
Number Required: 07 Nos.

Sr. No.	Parameters	Description Compliance
01.	Electromagnetic lock is integrated with access control system to lock the door while access control system id activated	<ul style="list-style-type: none"> •12/24 V DC operation •600 lbs holding force •UL Approved locks •600-lbs with built in bond sensor & relay output Low energy consumption Silent, continuous duty operation Applicable to all single and pairs of swinging, sliding and roll-up doors Designed to interface with virtually all access control and alarm systems Instantaneous release in the event of fire

13. Push to Exit Button
Number Required : 07 Nos.

Sr. No.	Parameters	Description	Compliance
1	Push to Exit Button is used to unlock the Electromagnetic lock while it is integrated with access control system. It makes the system from Normaly Close(NC) mode to Normaly open(NO)	Product Name:Stainless Steel Push to Exit Button Press to exit button/switch General current rating: 3A at 36V DC maximum with NO/NC Standard structure: stainless steel panel with stainless steel button Color:Stainless Steel Brushed	

14. Vehicle Tracking System
Number Required : 03 Nos.

S. No.	Parameter	Description
1	Plan	To set up route/ entering/ not entering/ leaving/ not leaving/ speed Plan/ oil pressure/ water temperature/ key on/ off/ temperature for sensitive cargo etc for individual or group of Vehicles.
2	Monitor	To monitor real time deviations of vehicles which have deviated from the original plan. <i>Software should be installed in local server.</i>
3	Map	To view the present location of vehicle on GIS Map (<i>Delhi/NCR Region</i>) along with the relevant stats of speed/ door/ battery.
4	Reports	To get various reports on instant.
5	Reports and Alerts	Can be generated thru email or SMS.
6	Profile	Details of the User.

15 (a). UPS 3KVA
Number Required : 03 Nos.

Sr.No.	Feature	Required Parameter
1	Output Power Capacity	3000 VA
2	Max Configurable Power	3000 VA
3	Nominal Output Voltage	230V
4	Output Voltage Note	Configurable for 220 : 230 or 240 nominal output voltage
5	Efficiency at Full Load	96%
6	Output Voltage Distortion	Less than 5% at full load
7	Output Frequency	47 - 53 Hz for 50 Hz nominal
8	Crest Factor	3:01
9	Waveform Type	Sine wave
10	Nominal Input Voltage	230V
11	Input Frequency	50/60 Hz +/- 3 Hz (auto sensing)
12	Control panel	LED status display with On Line On Battery Replace Battery and Overload indicators
13	Audible Alarm	Audible and visible alarms : configurable delays
14	Operating Environment	0 - 40 °C
15	Network manageable	Provides remote management of the UPS over the network.
16	Typical recharge time	3 hour(s)
17	Environmental Compliance	RoHS 7b Exemption
18	Regulatory Approvals	CE, EN

15 (b) UPS- 1 PHASE 1N 1G
Number Required - 02 Nos.

Specification

<i>Output</i>	
<i>Output Power Capacity</i>	<i>4000 Watts / 5000 VA</i>
<i>Max Configurable Power</i>	<i>4000 Watts / 5000 VA</i>
<i>Nominal Output Voltage</i>	<i>230V</i>
<i>Output Voltage Note</i>	<i>Configurable for 220: 230 or 240 nominal output voltage</i>
<i>Efficiency at Full Load</i>	<i>96%</i>
<i>Output Voltage Distortion</i>	<i>Less than 5% at full load</i>

<i>Output Frequency (sync to mains)</i>	<i>47 - 53 Hz for 50 Hz nominal</i>
<i>Crest Factor</i>	<i>3: 1</i>
<i>Waveform Type</i>	<i>Sine wave</i>
<i>Output Connections</i>	<i>(8) IEC 320 C13 (2) IEC 320 C19 (4) IEC Jumpers</i>
<i>Input</i>	
<i>Nominal Input Voltage</i>	<i>230V</i>
<i>Input Frequency</i>	<i>50/60 Hz +/- 3 Hz (auto sensing)</i>
<i>Input Connections Hard Wire</i>	<i>3-wire</i>
<i>Input voltage range for main operations</i>	<i>160 - 286V</i>
<i>Input voltage adjustable range for mains operation</i>	<i>151 - 302V</i>
<i>Batteries & Runtime*</i>	
<i>Battery Type</i>	<i>VRLA</i>
<i>Typical recharge time</i>	<i>3 hour(s)</i>
<i>Replacement Battery</i>	<i><u>RBC55</u></i>
<i>RBC™ Quantity</i>	<i>2</i>
<i>Extended Run Options</i>	<i><u>UPS 5000VA 230V Rackmount/Tower</u></i>

****Battery to be replaced, every two years,the clause to be part of CAMC***

<i>Communications & Management</i>	
<i>Pre-Installed Cards</i>	<i>AP9617</i>
<i>Control panel</i>	<i>LED status display with On Line</i>
<i>On Battery</i>	<i>Replace Battery and Overload indicators</i>
<i>Audible Alarm configurable delays</i>	<i>Audible and visible alarms</i>
<i>Surge Protection and Filtering</i>	
<i>Surge energy rating</i>	<i>480 Joules</i>
<i>Filtering</i>	<i>Full time multi-pole noise filtering:0.3%</i>
<i>IEEE surge let-through : zero clamping response time</i>	<i>meets UL 1449</i>
<i>Physical</i>	
<i>Maximum Height</i>	<i>222.00 mm</i>
<i>Maximum Width</i>	<i>483.00 mm</i>
<i>Maximum Depth</i>	<i>660.00 mm</i>
<i>Rack Height</i>	<i>5U</i>
<i>Net Weight</i>	<i>97.73 KG</i>
<i>Shipping Weight</i>	<i>106.82 KG</i>
<i>Shipping Height</i>	<i>635.00 mm</i>
<i>Shipping Width</i>	<i>610.00 mm</i>
<i>Shipping Depth</i>	<i>762.00 mm</i>
<i>Color</i>	<i>Black</i>
<i>Units per Pallet</i>	<i>3.00</i>
<i>Environmental</i>	

<i>Operating Environment</i>	<i>0 - 40 °C</i>
<i>Operating Relative Humidity</i>	<i>0 - 95%</i>
<i>Operating Elevation</i>	<i>0-9000 meters</i>
<i>Operating Temperature</i>	<i>-5°C to +50°C</i>
<i>Storage Temperature</i>	<i>-15 - 45 °C</i>
<i>Storage Relative Humidity</i>	<i>0 - 95%</i>
<i>Storage Elevation</i>	<i>0-15000 meters</i>
<i>Audible noise at 1 meter from surface of unit</i>	<i>53.00 dBA</i>
<i>Online Thermal Dissipation</i>	<i>430.00 BTU/hr</i>
<i>Integration :</i>	<i>Capable of Integration with the overall architecture of Surveillance & Access Control System</i>
<i>Conformance</i>	
<i>Certification</i>	<i>C-tick, CE, EN 50091-1, EN 50091-2, GOST, GS Mark, VDE</i>
<i>Environmental Compliance</i>	<i>RoHS 7b Exemption</i>

**The time to recharge to 90% of full battery capacity following a discharge to shutdown using a load rated for 1/2 the full load rating of the UPS.

15 (c) UPS- 3 PHASE 1N 1G

Number Required- *01 No.*

General

<i>Bypass Connection</i>	<i>5 wire 3PH + N + G</i>
<i>Max Bypass Input Current</i>	<i>162A</i>
<i>Bypass Protection Device</i>	<i>175A</i>

Output

<i>Output Power Capacity</i>	<i>10 kW / 10 kVA</i>
<i>Max Configurable Power</i>	<i>40 kW / 40 kVA</i>
<i>Nominal Output Voltage</i>	<i>120V, 208V, 208V 3PH</i>
<i>Output Voltage Distortion load</i>	<i>Less than 5% at full</i>
<i>Output Frequency (sync to mains) nominal</i>	<i>57 - 63 Hz for 60 Hz</i>

Output Connections

(1) Hard Wire 5-wire (3PH + N + G)

(1) Screw Terminals

<i>Output Voltage Tolerance load step</i>	<i>+/-1% static and +/- 5% at 100%</i>
<i>Output Voltage THD and < 5% for full n</i>	<i>< 2% for 0 to 100% linear load</i>
<i>Overload Operation seconds at 150%</i>	<i>60 seconds@ 125% and 30</i>

<i>Required Output Current Protection</i>	<i>150A</i>
<i>Bypass</i>	<i>Built-in Static Bypass</i>
Input	
<i>Nominal Input Voltage</i>	<i>208V 3PH</i>
<i>Input Frequency</i>	<i>50/60 Hz +/- 5 Hz (auto sensing)</i>
Input Connections	
<i>Hard Wire 5-wire (3PH + N + G)</i>	
<i>Input voltage range for main operations</i>	<i>177 - 240V</i>
<i>Maximum Input Current</i>	<i>162A</i>
<i>Input Breaker Capacity</i>	<i>175.0 A</i>
<i>Type of Input Protection Required</i>	<i>3-pole breaker</i>
Batteries & Runtime	
<i>Battery Type: Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof</i>	
<i>Included Battery Modules</i>	<i>1</i>
<i>Available Battery Slots</i>	<i>3</i>
<i>Typical recharge time</i>	<i>2 hour(s)</i>
<i>Nominal Battery Voltage referenced to neutral)</i>	<i>+/-192 V (split battery</i>
<i>DC Overcurrent Protection</i>	<i>125A</i>
<i>Efficiency in Battery Operation</i>	<i>94%</i>
<i>Overload Operation</i>	<i>60 seconds@ 125% and 30 seconds at 150%</i>

16. ARMORED POWER CABLE*
Quantity Required : 5000 mtrs

S.No	Particulars	Description
1	Type of cable	2XWY
2	Voltage Grade V	1100
3	No of cores X size in sq mm	3 X 2.5
4	Conductor	
4 (a)	Material	Plain annealed Copper to IS:8130/1984
4 (b)	Max. d.c. resistance of conductor at 20° C (ohm/km)	12.1
4 (c)	Shape of the conductor	Solid Circular
6	Insulation	
6 (a)	Material	XLPE as per IS 7098(Pt-1)/88, Latest
6 (b)	Nominal thickness (mm)	0.7
7	Inner Sheath	
7 (a)	Material	Extruded PVC Type ST2 as per IS:5831/84

7 (b)	Minimum thickness (mm)	0.3
8	Armoring	
8 (a)	Material	Galvanized Steel
8 (b)	Type of armoring	Round Wire
8 (c)	Nominal size of armor (mm)	1.4
9	Outer Sheath	
9 (a)	Material	PVC Type 'ST2' as per IS:5831/84
9 (b)	Thickness (mm)	1.24 (Min.)
10	Electrical Parameters	
10 (a)	Max. a.c. resistance of conductor at 90° C (ohm/km)	15.4
11	Maximum conductor temperature under normal operating conditions	90°C
12	Maximum conductor temperature at the termination of short circuit	250°C
13	Short Circuit rating of conductor for the duration of 1 sec (kA)	0.21
14	Continuous Current carrying capacities :-	
14 (a)	In Ground at 30°C (A)	25
14 (b)	In Air at 40°C (A)	21
15	Applicable Standard	IS 8130/84, IS 7098 Part I/88, IS 5831/84, IS 3975/88 etc. with latest up to date amendments
16	Approx. overall diameter of the cable in mm	12.5 ± 2.0
17	Minimum bending radius	12 times Overall diameter
18	Max. Tensile strength	-----

* Actual quantity may vary depending upon as built design

17 Input Out Box (I/O Box)
Number Required : 34

S. No.	Description
01.	Plug retention force 140 N
02.	Plug reliability 700 cycles
03.	High Grade Metal Cover

18. 8 Port Network Switch
Number Required: 08 Nos.

Sr. No.	Specification
1	8 RJ-45 10/100 mbps ,with 4 PoE ports
2	1MB buffer memory.
3	LED Indications.
4	4K No. MAC Address.
5	Auto MDI/MDIX on every port to Eliminates most common cabling problems, whether the port is connected to a server, PC, or another
6	Shall be silent.
7	Regulatory/Agency Approvals-EMC:FCC Class-B
8	Operating temperature: 0° to 40°C (32° to 105°F)
9	Operating Humidity: 0% to 95% (non-condensing humidity)
10	Shall Allow users to connect at 1000Mbps, 100Mbps or 10Mbps with optimum throughput for bandwidth intensive applications, while ensuring compatibility with legacy equipment
11	Traffic Prioritization (IEEE 802.1p) to Ensures that real-time applications (such as voice and video) take priority so they can run effectively, even during bursts of high traffic load
12	Front panel diagnostic LEDs to offer immediate notification of problems, such as excessive network use, without requiring special technical knowledge
13	Full duplex support of network to Allows full, two-way data transfer, doubling the effective bandwidth
14	Plug-and-Play convenience to Provide simple set-up with no complicated configuration for hassle-free installation
15	Silent operation to eliminate disturbances caused by workplace equipment
16	Operating system independence to Allow maximum integration of different operating systems within your network; no extra configuration of the network required
17	FCC Class B certified for home as well as office use; complies with a more stringent certification than Class A

19. LAYER 2 MANAGED SWITCH Number Required : 01		
Sr.No	Parameter	Specification
1	Physical Ports	24 RJ-45 10/100Base-T ports
		2 Combo Gigabit (RJ-45/SFP) ports
		1 RJ-45 console port
2	Performance	Switching Capability: 5.6Gbps
		Packet Buffer Size: 4Mb
		MAC Address Table: 8K
3	L2 Features	Auto-negotiation for port speed and duplex mode
		Flow Control
		IEEE 802.3x for full duplex mode
		Back-Pressure for half duplex mode
		Spanning Tree Protocol
		IEEE 802.1D Spanning Tree Protocol (STP)
		IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
		IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
		VLANs
		Supports 256 IEEE 802.1Q VLANs
		Port-based VLANs, MAC-based vlan
		IEEE 802.1v Protocol-based VLANs*
		IEEE 802.3ad Link Aggregation Control Protocol
		Trunk groups: 5; 2~8 per FE trunk; 2 per GE trunk
		IGMP Snooping
		IGMP v1/v2 /v3 snooping
IGMP v1/v2 querier support		
MVR/ISM (Multicast VLAN Registration)		
Supports jumbo frames up to 9KB		
4	IPv6 Features	§ IPv4/IPv6 Dual Protocol stack
		§ IPv6 Address Types Stack: Unicast
		§ ICMPv6
		§ ICMPv6 Redirect (Host)
		§ IPv6 Telnet Support
		§ IPv6 DNS Resolver
		§ IPV6 Radius+ Support
		§ IPv6 TACACS+ Support
		§ IPv6 Syslog Support
		§ Remote IPv6 Ping

5	QoS Features	Priority Queues: 4 hardware queues per port
		Traffic classification based on IEEE 802.1p CoS,
		IP Precedence, DSCP, TCP/UDP port number
		Supports WRR and Strict scheduling
		Rate Limiting (Ingress and Egress, per port base)
6	Security	Static Port Security (MAC-based)
		Dynamic Port Security (MAC-based)
		MAC Limitation per port
		Supports IEEE 802.1X port based (single host & multiple host)
		Supplicant support
		EAPOL transparent
		L2/L3/L4 Access Control List
		Time-based ACL
		SSH (v1.5/v2.0)
		Link Detection
		MAC Filter
7	Management	Switch Management
		CLI via console port or Telnet
		WEB management
		SNMP v1, v2c, v3
		Firmware & Configuration:
		TFTP & HTTP
		Auto upgrade – TFTP
		Supports RMON (4 Groups)
		Supports BOOTP, DHCP client for IP address assignment
		Port Mirroring
		IP Clustering (up to 32)
		LLDP
		VLAN Mirror
		SNMP over IPv6
QOS Features		
8	Power Consumption	As per OEM
9	Environmental Specifications	Temperature
		Standard operating: 0°C to 45°C
		Non-operating: -40°C to 70°C
		Humidity: 10% to 90% (Non- condensing)

20. 12 port LIU
Number Required: 08 Nos.

S. No	Parameters	Specification
1	Box	19"rack mountable
		Complete powder coating and aluminum Housing
2	Splice Trays	Complete Aluminum Body
		Provision for 6 / 12 Fiber splices
		Cushioned splice holder
3	Cable Spools	Flame retardant plastic
		Two halves spool design

21. Gigabit Media Converter
Number Required: 16 Nos.

Sr. No.	Parameters	Description
1	The Media Converter series extends the reach of traditional UTP based LAN from 100Meters to distance of 40 Km and beyond using Fiber optics media. These media converter series also features LFP (Link Fault Pass-through) function for easily tracing the network link failure. LFP function can enhance the integrity and conformity of the TP Fiber linking to improve the maintainability of the network. It has easy-to-read diagnostic LED's for continuous status reports on network speed, duplex media access control connection and network traffic.	Fibre Mode : Single Mode/Multimode Wavelength : 1310nm Fibre Cable : 9/125Micron 62.5 or 50 /125Micron Fiber Cable Distance : 20Kms min 500mtrs on 50 Micron Fiber Connector : SC type Copper UTP Port : RJ-45 Power Adapter : External DC5V, 1A ACT External DC5V, 2A Operating Temperature : 0° ~ 50° Humidity : 5% ~ 90% Non-condensing Certifications : CE , FCC

22. Pig tail
Number Required: 96 Nos.

S. No	Parameters	Specification
1	SC SC	As per supplication 1310nm single mode pigtails

23. Patch Cord
Number Required: 32 Nos.

S. No	Parameters	Specification
1	Form Factor	As per the form factor of switch 1310nm single mode 1 meter patch cord

24. 6 U Rack
Number Required : 08

S. No.	Description
01.	Bolted Construction
02.	Top and Bottom Cable Entry
03.	Load Capacity of 35 Kg
04.	Tinted front glass
05.	6 U Wall mount form factor

25. Boom Barrier
Number Required : 03 Nos.

S. No	Parameters	Description
1	Boom Length	2 mtr ~ 4mtr
2	Power supply	230V~ ± 10%, 50 Hz
3	Motor Power supply	24 DC
4	Current Drawn	13- 15A Max
5	Control Panel	Inbuilt in the steel cabinet
6	Max Boom lengths	4.0m
7	Opening/closing time	Adjustable timing up to 1.4 sec or better
8	Type of lock on cabinet	Mechanical closing/opening
9	Manual Manoeuvre	Spring/liver/shaft
10	Cabinet Material	Galvanized and Painted steel
11	Warning Lights/Hooters	Fitted with Flash Lights and Hooter
12	Environmental conditions	-20°C to +55°C
13	Duty Cycle	Intensive
14	Max torque	200Nm
15	Boom Bar	Rectangular boom with protective rubber profile
16	Opening and closing operation	By Remote & push Button
17	Safety sensor	Optical sensor
18	Integration	Provisioned for Future integration with third party equipments (RF Tags, Readers....)
19	Certified	CE

26. Flap Barrier
Number Required : 01

S.No	Parameters	Description
1	Application	Indoor
2	Drive Technology	Superior Technology because of the absence of the Limit switches, Slip clutches for braking & friction free components thus giving long life & maintenance free operation
3	Gate/Barrier	Micro Processor Based Motor Controller with inbuilt Speed control and Dynamic Braking Features: Micro Processor Based Barrier Controller with Logic for Motor, Safety Sensors and Lane Indicators.
4	Throughput	25 to 30 persons per min. (excluding card validation time)
5	Operation	Bi-directional
6	Housing Dimension	Regular Lane: L 1300mm x W 250mm x H 1035mm with telescopic Flap
7	Lane Width	Regular Lane: 520mm
8	Flaps	Regular Lane: Soft Wing with steel reinforcement
9	Power Supply	230+/- 10% VAC, 50 Hz.
10	Material of Construction	Carbon Steel Powder Coated Finish or Stainless Steel in Grade 4 Finish
11	Protection	Three surface layers in accordance with special coating(Zinc plus 2 layers of plastic coating)
12	Power-Off / Emergency	Fail Safe Mode - Flaps will Automatically Open during Power Failure. Also can be configured for Flaps to remain closed during power failure.
13	Safety	Use of Soft rubber flaps in combination with MHTM motor for very quick reversibility and enhanced pedestrian safety
14	Duty Cycle	100%
15	Ingress Protection	IP56
16	Temperature Range	-5° C to +50° C
17	Braking	Dynamic Braking for smooth resting of flaps.
18	MTBF-Mean Time Between Failure	2 Million Cycles

19	Integration	Shall function in integration with Smart cards, proximity reader based access control systems, Bio-metric systems etc
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**27. Road Blocker
Number Required : 01**

S.No	Parameters	Description
1	Drive Unit	Electro-hydraulic
2	Electric motor capacity	approx. 4 kW, 3phase, 50/60 Hz
3	Protection class	IP 55
4	Total weight	2950 Approx
5	Dimension of underground casing	4390 x 1340 x 1150 mm (L x W x H)
6	Static impact load	450/500KN
7	Wheel load	100 kN vertically
8	Operation time	Raising 4-5 sec., lowering 3-4 sec.
9	Surface protection	zinc plus 2 layers of plastic coating
10	Hydraulic fluid	Mineral or biodegradable fluid
11	Operation temperature range	- 10° C to + 60° C
12	Power failure / emergency operation	by integrated hydraulic hand pump
13	Electric controls	Steel or glass-fiber reinforced cabinet, IP55
14	Integration	Capable of integration with ISS

28. Bollards
Number Required : 01

Specification

<i>Unit</i>	<i>03 Fold Unit</i>
<i>Drive Unit</i>	<i>Electro-hydraulic</i>
<i>Electric motor capacity</i>	<i>Approx, 4kW, 3-phase, 50/80Hz, 400 V</i>
<i>Protection class</i>	<i>IP 55</i>
<i>Blocking height above ground</i>	<i>800 mm</i>
<i>Bollard diameter</i>	<i>220 mm(minimum)</i>
<i>Impact load</i>	<i>approx. 350 KN</i>
<i>Wheel load</i>	<i>100 KN</i>
<i>Static impact load</i>	<i>100 KN vertically</i>
<i>Operation time</i>	<i>Raising 5-8 sec., lowering 5-6 sec.</i>
<i>Surface protection</i>	<i>Three surface layers in accordance with special coating (zinc plus 2 layers of plastic coating)</i>
<i>Hydraulic fluid</i>	<i>Mineral or biodegradable fluid</i>
<i>Operation Temperature Range</i>	<i>- 5°C to +50°C</i>
<i>Power failure/ emergency operation</i>	<i>By integrated hydraulic hand pump & Hydraulic accumulator</i>
<i>Electric controls, inside outdoor cabinet</i>	<i>Steel or glass-fiber reinforced cabinet</i>
<i>Material of Construction</i>	<i>Carbon Steel with Stainless Steel in Grade 4 finish and the housing top cover made out of high-impact engineering plastic with customizable SS sheets.</i>
<i>Integration</i>	<i>Capable of Integration with the overall architecture of Surveillance & Access Control System</i>
<i>Crash Rating Certificate</i>	<i>Confirming to K-8 or certified equivalent</i>

29. UNDER VEHICLE SCANNING SYSTEM

Number Required : 01

S.No	Description
1	The UVSS should be able to capture very high resolution & complete composite underbody image of any vehicle passing over it using a single high resolution digital progressive Area-scan GigE IP camera, without the vehicle being required to be stopped.
2	The UVSS should be able to handle vehicles moving at different speeds ranging from 0 to 20 Km/hr, while the composite image so captured by the system should be automatically and dynamically adjusted according to the speed of the vehicle using multiple loop based sensors.
3	<p>The Composite imaging camera should be a high quality, color AREA SCAN, GigE type, with minimum XGA resolution of (1024 x 768) or above. The minimum specification of this Area-scan camera to be :-</p> <p>Camera Type: Gigabit Ethernet progressive Area-scan color camera</p> <p>Sensor: CCD XGA resolution (1024x768) or better with AoI (Area of Interest) settings</p> <p>Frame rate: 30 fps at full resolution, more than 100+ fps in AOI mode</p> <p>Field of View:> 135</p> <p>Format:GiGE Vision compliant specifications</p> <p>Composite Image resolution of the underside : 3 megapixel or higher</p> <p>Camera certification : CE/FCC</p> <p>Camera casing ingress protection rating : IP 68 or better , duly certified by an independent certifying agency.</p>
4	The UVSS should be capable of producing a clear and undistorted image of the vehicle underside, even when a vehicle has completely stopped / halted over the UVSS unit, i.e it must still be able to create a seamless and perfect composite image of the underside irrespective of stoppage or non-uniform motion of the vehicle over the scanner.
5	The UVSS should not use either a digital Line-Scan camera based technology or any type of analog cameras to form composite image
6	The UVSS must have feature to magnify (zoom) the composite images (current and past), in order to facilitate a closer view of any part of the composite image.

7	The underside illumination must be adequate and obtained through any state-of-the-art, long life, LED lighting modules. Halogen or CFL type lighting elements for illumination of the underside will not be accepted.
8	The UVSS should be able to dynamically and automatically adjust the brightness and contrast of the composite image, so as to ensure good quality images, irrespective of the different external lighting conditions.
9	There should be 3 or more additional view cameras for capturing motion video images of the deeper/ hard-viewing areas of the underside, e.g. areas around suspensions, below the engine areas, side wall of fuel tanks & exhaust pipes etc.
10	The UVSS should also provide a feature to capture the image of the driver of all RHS driven vehicles, captured through a suitable driver view camera.
11	The system should have an Automated Number Plate Reading System (ANPRS) tuned to the Indian license plates, i.e. it should be able to automatically read and record a wide range of vehicle registration number plates' alpha-numeric characters, written in English. Also, the frontal image view of the vehicle to be provided in the GUI, to facilitate manual viewing of the license plate image.
12	The UVSS should give a real-time output of all the data simultaneously i.e. the composite image, additional videos of hard-viewing cameras, driver photos, vehicle's frontal image and its number display – all should be displayed on the monitor almost instantaneously. Also, the system should have the facility to view the composite image and video images in off-line mode also, for all vehicles.
13	The UVSS musts have a built-in software diagnostics capability, to facilitate any distant software support to be offered offline though over internet.
14	The UVSS applications & operating software should preferably be based on open architecture on Linux platform. It must have an user friendly Graphical User Interface (GUI) with provision for multiple users logging of events and search facility., with an option to choose and operate the system in Hindi or any other local state language graphical user interface (GUI), in addition to English.
15	The UVSS system must have a facility to take back-up of all the transactions to any usual backup / storage media and also should be able to print out reports.
16	The UVSS underground cameras should be enclosed in a suitable all-weather-proof housing of IP68 equivalent or higher standard. A certificate to this effect, after duly tested, by a competent government certifying organization shall be preferred, and to be submitted.

17	The overall installed unit should be properly designed, and its structure should be able to withstand a total vehicle load upto 40-Tons at any point over the structure, more particularly at the centre of the unit, so as not to suffer any accidental physical damage to the unit and the components under the pit cover. A suitable pit air-conditioning system should be provided to cool the UVSS during the high ambient temperature occasions
18	The UVSS should have open protocol for integration with other security systems and also networking for any remote monitoring requirements.

Specification

1	Main Camera	Sensor Type Digital Progressive Scan(CCD)
		Resolution 1024 X 768 and above
		Video Format GigE
		Certifications CE and FCC compliant
		Power Supply 12V to24V DC, < 10 W
2	License Plate Capture Camera	Interface IP
		Format HDTV 720p/1080
		Resolution 1 Megapixel and above
		Shutter Speed 1/50 to 1/10000 and above
		Frame Rate 25 / 30 fps
3	Auxiliary Camera	Sensor Type CCD/CMOS Color Area Sensor
		No. of Pixels 640X480/704X480 Pixels
		Video format NTSC/PAL
		Resolution 480 TV Lines
		Power supply 12 V DC
4	Mechanical Structure	Material Structural Steel with 'Rust free'
		stainless steel top
5	Environmental Protection	Camera and Light
		Enclosure
		IP 68
6	Processing Unit	Processor Intel Pentium (2.4 GHZ) or better
		RAM 1 GB
		Hard Disk Capacity 500 GB
		PCI/PCIe Slots 2 PCI/PCIe Slots
		Display Monitor 19" Color TFT
7	Sensor Unit	Type Inductive Loop Sensor
		Power Requirements 220V AC
		Output NO/NC Relay Type
8	Lighting Unit	LED Light Unit 220 V AC, 120 W
9	Unit dimensions (LxBxH)	1890 X 1425 X 510 (in mm)

10	Installation and Mounting	Fixed: Underground Installed
11	Speed Limit	20 kmph
12	Load bearing capacity	40 Tonnes
13	Operating Temperature	-5° to 50 °C
14	Local Language Support	Yes
15	Integration	Capable of integration with the overall architecture of Surveillance and Access Control System

**30. Automated License Plate Recognition System (ALPRS)
Number Required : 01**

- (i) The system needs to be installed at the main exit of the building premises.
- (ii) The System should automatically detect a four wheeler approaching the installed location by means of inductive loops
- (iii) On detection of vehicle approach, the system would activate the license plate video capture cameras
- (iv) The System shall automatically detect the license plate in the captured video feed in real-time.
- (v) The system shall perform OCR (optical character recognition) of the license plate characters (English alpha-numeric characters in standard fonts).
- (vi) The System shall store JPEG image of vehicle and license plate and enter the license plate number into Postgre SQL database along with date timestamp and site location details.
- (vii) System should be able to detect and recognize the English alpha numeric License plate in all standard fonts and formats of all four wheelers including cars, HCV, LCV. Apart from printed license plates, the system should also be able to perform ecognition on hand painted straight font alpha numeric number plates in standard formats found in Indian license plates.
- (viii) The system processing should be real time i.e the recognition of license number plates will happen instantaneously (within less than a second delay).
- (ix) The system should be able to process and read number plates of vehicles with speed even up to 30km/hrThe system shall be robust to variation in License Plates in terms of font, size, contrast and color and should work with good accuracy.
- (x) The system should store video clip of the vehicle approaching and leaving the location.

- (xi) The system should have option to input certain license plates according to category like “Wanted”, “Suspicious”, “Stolen”, “Expired”, etc by authorized personnel. On successful recognition of the number plate, system should be able generate automatic alarm to alert the control room for vehicles which have been marked as “Wanted”, “Suspicious”, “Stolen”, “Expired”. System should have provision/expansion option to add more categories for future need].
- (xii) The instantaneous and automatic generation of alarms should afford ample opportunity to the customer to manually deploy a suitable barrier which will prevent the escape of such vehicles.
- (xiii) System shall have option to be integrated with other access control hardware on site.
- (xiv) The system shall enable easy and quick retrieval of snapshots, video and other data for post incident analysis and investigations.
- (xv) The system should be able to generate suitable MIS reports that will provide meaningful data to concerned authorities and facilitate optimum utilization of resources. These reports shall include:
- a) Report of vehicle flow at each of the installed locations for Last Day, Last Week and Last Month.
 - b) Report of vehicles in the detected categories at each of the installed locations for Last Day, Last Week and Last Month.
 - c) Report of Vehicle Status change in different Vehicle Categories.
- (xvi) The system shall have Search option to tune the reports based on license plate number, date and time, site location as per the need of the authorities.
- (xvii) The system shall have option to save custom reports for subsequent use.
- (xviii) The system shall have option to export report being viewed to common format for use outside of the ANPRS or exporting into other systems.
- (xix) The system should provide advanced and smart searching facility of License Plates from the database. There should be an option of searching number plates almost matching with the specific number entered (up to 1 and 2 character distance).
- (xx) The system should have option to add new category by authorized personnel.

(xxi)The system should have option to update vehicle status in specific category by authorized personnel. E.g On retrieval of stolen vehicle, system entry should be changed from “Stolen” to “Retrived”.

(xxii) System should provide an option for advanced users to tune the system parameters.

(xxiii)System should have option to configure site locations and data management settings.

(xxiv)The Central Management Module shall run on the ANPRS Central Server in control room.

(xxv)System should have ability to perform remote management from control room, including:

- a) Vehicle Category Editor
- b) Vehicle Log Module
- c) Password Management

(xxvi) The Hardware specification for the ANPRS should be a minimum of below:

(xxvii) The System should also have provision for Visitor card collection kit for visitors dropping the cards into a slot for exiting of vehicle.

Technical Specification:

Camera	Interface	IP
	Format	HDTV 720p/1080
	Resolution	1 Megapixel and above
	Shutter Speed	1/50 to 1/10000 and Above
	Operating Temperature(°C)	0 - 50 °C
	Frame Rate	25/30 fps
LENS	Varifocal	5-50mm
	Electronic IRIS Control	DC Type
	Mount	C/CS
	Image Format	1/4" / 1/3" / 1/2"
IR Illuminator	Wavelength	850 nm (Semi Covert)
	IR Illuminator Range	10-15m
	Environment Protection	IP65 / IP66
Filters		IR Filters

Camera Housing	Environment Protection Housing	IP65 / IP66
	Processor	Intel Core 2 Duo (3 GHz) or better
	RAM	1 GB RAM
	Hard Disk Capacity	500 GB
	Display Monitor	19" Flat
Speed Limit		40 Km/hr
Installation and Mounting		`Pole Mounted
Integration	Capable of integration with the overall architecture of Surveillance and Access Control System	

(xxviii) **System Performance**

- (a) The system should work in both day and night conditions with good accuracy.
- (b) The system should have a minimum **95% plus vehicle detection** accuracy.
- (c) The system should have an accuracy of **at least 90% vehicle number plate recognition capability** for printed license plates in standard format and fonts.

**31. Explosive Detection System:
Number Required : 01 No.**

Specification:

<i>Detector Type</i>	<i>Ion Trap Mobility Spectrometer (ITMS ®)</i>
<i>Analysis Time</i>	<i>Maximum 07 Seconds</i>
<i>Sample Acquisition</i>	<i>Surface wipe or optional vacuum collection</i>
<i>Operating Temperature</i>	<i>0° to 50° C</i>
<i>Storage Temperature</i>	<i>0° to 50° C</i>
<i>Battery Backup</i>	<i>60 minutes of standby time</i>
<i>Computer</i>	<i>Pentium based, industrial grade, single board computer, solid-state hard disk</i>
<i>Display</i>	<i>10.4 in (26.4 cm), 640 x 480 pixel, 300 nits brightness, TFT-LCD monitor with resistive touch screen</i>
<i>Signal Processing</i>	<i>Recognition on multiple peaks and Explosives output to 04 different display types, including bar graph display or time-of-flight plasmagram display</i>
<i>Detection Modes</i>	<i>Explosives (optimized negative ion mode)</i>
<i>Explosive Detected</i>	<i>RDX, PETN, TNT, Semtex, Tetryl, NG, Nitrates, HMX etc</i>

32. Hand Held Explosive Detector
Number Required: 04 Nos.

Type	Hand held/Portable
Principle of detection	FAIMS (Focusing of ions at Atmospheric pressure in a high-field asymmetric waveform Ion Mobility Spectrometer) No Radio-active source & materials. Vapour and Particle Trace detection
Detectable substance	Capable of detecting most military and commercial explosives.
Explosives type Capable of detection explosives.	Nitroglycerine (NG), EGDN, trinitrotoluene (Tol, Trotyl, TNT), PENT (Tetranitrapentaerythrit, pentaerythrittetranitrate, pentrit, PENTN), hexogen (RDX), oktogen (HMX), tetryl (Tetril), threeacetoneethreeperoxide(Cyclethreeacetoneethreeperoxide, TATP) μ nitrocellulose powders, engaging mixing explosives on their ground: Semtex and other plastic and elastic explosives on the basis of RDX, PENT or their mixture, B-type compositions (TT- 20, TT-40, TT-60, TT-80, MC,) C-type (C1, C2, C3, C4, etc.), H-6, HBX, Minol-2, Amatol. Primacord, Primasheet, Tetritol, Tritonal, Cordit N.
Sensitivity	Not worse, then 10-13 gramme/centimetre ³ by TNT for Vapour detection mode (at the temperature of +20°C and relative humidity of 80%)
Field programmable	Field programmable by operator for changing parameters of threshold level and the mode of operation from the key of main unit.
Display/Detection	On LCD Main unit- alarm, level alarm and audible alarm in when threshold level is exceeded
False Alarm	less than 1%
Response time	Sample intake & Response & Analysis time in Vapor mode- 8 to 10 seconds. Response & Analysis time in Particle mode – 2-3 seconds.
Sampling capability	Vapour and Particle mode.
Alarm mode	Visual and Audio
Calibration	Automatic adjustment
Fault identification	Error Message when unit requires service or low battery.
Warm up/start time	No more, that 10 seconds (in Vapor mode), 3..4 minutes in particle mode (time of a warming up of a heater)
Output/massage display	LCD message display, audio alarm
Controls	Main unit-power switch and 3 operate key.
Power supply	6V DC rechargeable battery, 1.3 AH

Option	AC/DC 100. .240 V/50. .60 Hertz power adapter (2 Pcs), Battery (2 Pcs), Charger.
Battery life/duration	Continuous operation time in self-contained regulations from one battery –upto 4 hours.
Power consumption	Nominal, not more, then – 2 Watts (without heater), - 10 Watts (with working heater).
Operational environment	Operating relative humidity-no more, that 90% RH (at + 25°C) no condensation.
Operating temperature	-5°C to + 50°C
Storage temperature	-5°C to +50°C, relative humidity no more, that 80% RH (at +25°C)
Safety standard	In accordance with Indian certificate of Public Service of Civil Aircraft and Sanitary epidemiological Conclusion
Weight	Main unit with the battery not more, than 2kg.
Dimension	Main unit = L30 x W9 x H18cm

**33. Full Height Turnstile
Number Required: 01**

S.No	Parameters	Description
1	Height	Height of Turnstile is 2212 MM. Passage clearance height is 2000 MM
2	Number of Lane/ passage	One
3	Type	90 degree stop
4	Technology	<input type="checkbox"/> Solenoid operation <input type="checkbox"/> 4 X 90 degree Stop
5	Walkway / Passage Clearance	530 MM (W) x 2000 MM (H)
6	Dimension	Height: 2212 MM Length: 1500 MM Width: 1500 MM
7	Power	230 VAC +/- 10% single phase
8	Frequency	50 Hz
9	Duty cycle	100%
10	Power consumption	40 Watt

11	Material of construction	Frame: 304 Stainless Steel Rotor & Bars: 304 Stainless Steel
12	Internals	Head Mechanism parts: Casting Zinc plated for corrosion resistance.
13	Power OFF	Free to rotate in either directions OR get locked in both directions or either direction
14	Weight	300-350 KG (approx)
15	Temperature range:	5 to 55 degree C
16	Humidity	90% non-condensing
17	Operation	Bi-directional
18	Passage control	Passage to be controlled in one or either direction
19	Locking	Mechanism to prevent the turnstile rotating in the opposite direction once it has traveled 25 degree past the rest position
20	Self centering mechanism	With hydraulic damping to ensure head always rotates quietly and smoothly to the neutral position
21	Action lock	Positive action lock which prevents two passage at one time
22	Fail safe & Fail lock variants in the event of removal of power supply	Available in Fail Safe & Fail lock variants. If fail lock is specified, then rotor will lock in both directions. If fail-safe is specified then the rotor will be free to be turned in both directions.
23	Through Put	10 – 12 Persons per minute per Lane

24	Integration	With any access control device like Smart Card Reader and / or Finger Print Reader (biometrics based Access Control System). Input: Potential free contact
25	Output(Rotation Detection Switch)	After 10° OR 45° rotation of rotor
26	Installation	Fixed to Concrete Floor by means of Anchor bolts, supplied with the Turnstile
27	Certification	CE Certified Safety Standards: EN 61010-1:03:94+ A2:07:95; IEC 1010-1:09.90 + AI:09:92 + A2:07:95 (for Electrical safety) EMC Standards: EN 61326 (for Emission & Immunity) Full Height should be manufactured by ISO 9001 certified Company

34 (a) Long Range RF Reader upto 10 mtrs
Number Required:02

Specification

<i>CPU</i>	<i>Dual 8bit (Microprocessor and ISM Band Receiver)</i>
<i>Multiple Reading</i>	<i>30 Tags/second</i>
<i>Frequency</i>	<i>2.45 GHz, ISM Band</i>
<i>Receiving Site Code</i>	<i>256 Site Code</i>
<i>Modulation</i>	<i>Encrypted GFSK 90° One directional Antenna</i>
<i>Directivity</i>	<i>360° omni-directional Antenna (optional/suitable for Access control and personnel tracking)</i>
<i>Receiver Gain</i>	<i>Better than – 80dBm</i>
<i>Power Current</i>	<i>DC12V/Max. 50mA</i>

<i>Output Format</i>	<i>26bit Wiegand and RS 232, Bargate Output RS232 9600bps, parity none, 8 Data bits, 1 Stop bit</i>
<i>Format Bargate Output</i>	<i>Max. 100mA (open Collector Output : 1s)</i>
<i>OTR (One Time Reading) Control Input</i>	<i>Low Active Input, DC12V, Max, 50mA Current Drain</i>
<i>HOLD Control Input</i>	<i>Low Active Input, DC12V, Max 50mA Current Drain, Vehicle Detector Input</i>
<i>LED indicator</i>	<i>Built-in red Color LED</i>
<i>Beeper</i>	<i>Built-in Piezo Buzzer</i>
<i>Operating Temperature</i>	<i>-5°C to + 50°C</i>
<i>Operating Humidity</i>	<i>10% to 90% relative humidity non-condensing</i>
<i>Color/material</i>	<i>ivory/Polycarbonate/Anodized Aluminum</i>
<i>Dimension (W x H x T)</i>	<i>7.9" x 7.9" x 1.9" (200mm x 200mm x 45mm) Approx</i>
<i>Integration</i>	<i>Capable of Integration with the overall architecture of Surveillance & Access Control System</i>

34 (b). Long Range RFID Card

Number Required - 150 Nos.

Specification

<i>Read Range</i>	<i>Up to 10 Meters</i>
<i>Frequency</i>	<i>2.45GHz</i>
<i>Directivity</i>	<i>Omni directional</i>
<i>Antenna</i>	<i>Monopole Antenna</i>
<i>Modulation</i>	<i>Encrypted GFSK/BPSK</i>
<i>Wake-up Time</i>	<i>Approx. 0.7sec or less</i>
<i>Site Code</i>	<i>256Site Code (000-255)</i>
<i>Tag ID numbers</i>	<i>Maximum 16 Millions ID Numbers per Site Code</i>
<i>Encryption</i>	<i>Secured Algorithm</i>
<i>Power</i>	<i>Coin Cell Lithium Battery, 3V 150mAh, CR2025</i>
<i>Battery Life Time</i>	<i>5 Years Guaranteed</i>
<i>Operating Temperature</i>	<i>-5°C to +50°C</i>
<i>Operating Humidity</i>	<i>10% to 90% relative humidity non-condensing</i>
<i>Dimension (W x H x T)</i>	<i>2.1' x 3.4" x 0.18" (54mm x 86mm x 4.5mm) Approx</i>
<i>Integration</i>	<i>Capable of Integration with the overall architecture of Integrated Security System</i>

**35 PC Server and Client Workstation for Access Control System
Number Required: 01each**

Specification:

(a) ISS Server minimum hardware requirement

- (i) Fault Tolerance Server, 2-way DMR, 3.2 GHz CPU, 1 MB iL2 Cache*
- (ii) 4-GB DDR2 Memory DIMM*
- (iii) 2/4 USB, 2 serial and 2 VGA Adaptor.*
- (iv) CD/DVD ROM*
- (v) Ultra 320 Adaptor for SCSI Connection*
- (vi) 500GB 3.5' 10K RPM Hard disk*
- (vii) NIC 10/100/1000 Ethernet pair*
- (viii) I/O Expansion Option*
- (ix) External SCSI tape connections;*
- (x) Rapid Disk Re-sync*
- (xi) USB Floppy Disk Drive Kit*
- (xii) Disk slot filler panel*
- (xiii) USB Keyboard and Mouse*

(b) ISS Workstation minimum hardware requirements;

- (i) processor : 3.1GHz or higher*
- (ii) RAM : 2GB or more*
- (iii) Hard disk : 120 GB or more*
- (iv) Graphic capability : VGA, with at least 32k colors*
- (v) Resolution Support : 1024 by 768
1280 by 1024
2048 by 768
2560 by 1024*
- (vi) Network : 100/1000 MB Ethernet Network Card.*

Integrated Security System Management Software

36. Application Software (AS).

Number Required - 01 Lot

Specification

(a) *The Application Software (AS) proposed shall be proven to be robust and reliable prior to being supplied, installed, tested and commissioned. It shall be user friendly and flexible enough to provide interactive operator prompting to assist operator who are not familiar with the system terminologies, operating system or menu structures, to be able to operate the system with ease and minimal training.*

(b) *The AS shall be of a web server based solution. Only Internet Explorer (IE6 and above) is required for a workstation to access the ISS server to start daily alarm monitoring and management operation.*

(c) *The ISS AS proposed shall provide English and RomanHindidescriptions and messages using both text based menus and graphical icon displays.*

(d) *The ISS AS shall be capable to support, but not limited to the following:*

- a. *Minimum number of active cardholders - 400,000*
- b. *Minimum number of readers - 1200*
- c. *Minimum number of access groups - 255*
- d. *Minimum number of time schedules - 255*
- e. *Number of programmable guard tours - 20*
- f. *10 digits programmable (Personal identification Number PIN Codes).*

The limits stated above shall be extended should they be found insufficient.

(e) Operator Rights.

(i) *The ISS AS shall provide different access rights to individual or groups of system administrators for each configurable field within the software.*

(ii) *The software shall also allow the programming of individual operator's permissions on certain selectable fields for edition. Permission shall be configurable to the following:*

- (A) *Read only*
- (B) *Read and write*
- (C) *Read, write, change*
- (D) *Read, write, change and delete*

(f) *The ISS AS shall provide a simple way for the system administrator to configure entrances selective from a list of pre-defined door models. The following list of door models shall be provided by the system:*

- a. Door with entry and exit reader*
- b. Door with entry reader and request to exit button*
- c. Door with entry or exit reader*
- d. parking lot with barrier and traffic light control*
- e. Elevator with floor control*
- f. Mantrap*
- g. Door with combined arm/disarm IDs function*
- h. Time and attendance door*
- i. Combined car/truck entrance with double reader*

(g) *Selective a pre-defined door model shall automatically assign the corresponding reader, input and/or output channel within the access modular controller hardware to the chosen function.*

(h) *Cardholder Enrolment* - *The ISS AS shall provide an easy way of entering cardholders into the database. In addition to basic data, such as first name, last name, badge number and access authorizations, the following information shall be possible, but not limited to:*

- a. PIN code*
- b. Validity period*
- c. Membership*
- d. Status fields, such as employee, visitor, guard*
- e. Address fields*
- f. Personal data*
- g. Individual fields editable by administrator*

(j) *Cardholder Images* - *It shall be a standard feature provided in the ISS management software for taking photos, scanning or importing cardholder images into the cardholder database, such that stored cardholder's image can be displayed automatically on the ISS workstation during access monitoring or for video verification purposes.*

(k) *Import and Export of Cardholder Master Records*

(i) *The ISS AS shall provide an import and export interface to import existing cardholder master records from a separate database or a Time & Attendance system or to export the master records for further use by another application.*

(ii) *The interface shall support at least commonly used comma-separated and fixed-field-length file formats for easy adaptation by applications when import or export.*

- (iii) *The interface shall support the definition of import and export rules, such as split an incoming name into first name and last name fields.*
- (l) *Access Authorizations - The ISS AS shall provide the grouping of entrances, which can consist of one or more readers. An entrance can be used by several groups. Access authorizations/entrance groups must be assignable directly to a cardholder, or be combinable with time models using area-time authorizations.*
- (m) *Area-Time Authorizations- the ISS AS Shall allow incorporating of access authorizations with time models. The assigned time model defines the time when an access authorization is active at an entrance/entrance group.*
- (n) *Time Models, Day Models and Special Days - The ISS AS provided shall allow the creation of time models for any specific day within the day models. Configuration for Special days, such as public holidays shall also be supported. The definition of time models provides a simple way of defining periodically recurring day models, which have a specific order. The time model can be used together with the access authorization at any entrance or entrance groups.*
- (o) *Access Profiles:*
- (i) *The ISS AS shall support the grouping of access authorizations of access-time authorizations, providing an easy way of assigning frequently used access profiles to card users and visitors.*
- (ii) *It shall be possible to allow a cardholder to carry only one card, where that card can function as a normal access card, or as an arm/disarm card, or as a time attendance card, or a combination of any of these functions. All cards shall be generic in nature and the controller shall be able to reassign the function(s) of each card depending on the door reader definition.*
- (p) *Defining the Area of Control- The ISS AS shall provide the ability for defining of logical areas, which could be single room, groups of rooms, entire floors (or parking lots) where access control points/entrances could be assigned to. Limitation on the maximum number of people (or cars) in the defined logical area shall be possible with programming.*
- (q) *Access Sequence Check- The ISS AS shall provide an access sequence check, allowing an authorized cardholder to enter a door or group of doors belonging to a pre-defined area only when he has already passed another dedicated door.*

(r) Dual or Multiple Authorized Access- The ISS AS shall provide the possibility to configure and allow access to an access controlled door only when at least two authorized cardholders present their badges at the card reader. The number of cardholders for that kind of access check in front of an entrance should not be limited by the system.

(s) Defining of Access Route:

(i) The ISS AS provided shall allow the definition of routes, which are special access authorizations that force the cardholder to follow through a defined path in fixed sequence of access doors when entering to a site or building, in order to reach the desired destination.

(ii) Route checking shall start automatically when the first reader is passed, and ends after passing through the last reader in the sequence. Any violation by the cardholder shall trigger an alarm at the ISS workstation.

(t) PIN Code - The ISS AS Shall support the input of a PIN code for each cardholder. The length of the PIN code should be definable in the system. The input of a validity period has to be supported.

(u) Duress Code Alarm - A duress code alarm message shall be generated at the ISS and display on the monitoring workstation when cardholders keyed in their PIN codes in another defined way.

(v) Blocking Cardholders and Blacklist - The ISS AS shall allow the blocking of cardholders, for example by validity period. An operator must also be able to add badges to a black list, for example when stolen or lost. If a black-listed card is used at a reader, an alarm has to be triggered to the ISS, displaying on the monitoring workstation all defined and corresponding alarm documents.

(w) Visitor Management – Administration of visitors shall be provided by the ISS management software in a separate databasewhich should be portable and compatible with main data base.

(x) The operatorshall be able to assign the following additional information to a visitor:

- a. Identification number
- b. Address
- c. Person to visit
- d. Attendant necessary
- e. Expected arrival and departure date and time
- f. Actual arrival and departure date and time
- g. reason for visit
- h. Access authorizations

(y) *Visitors shall be handled separately from employees.*

(z) *The visitor management shall allow the printing of a visitor badge from this data.*

(aa) Guard Tour - *The ISS AS shall provide the possibility to use existing access reader hardware to perform guard tours. The system must allow the grouping of readers to a guard tour sequence. The delay time a guard needs between two readers (checkpoints) shall be definable. All violations, such as wrong sequence or timeout, shall trigger an alarm and logged in database at the ISS.*

(ab) Video Verification Access:

(i) *The ISS AS shall provide the possibility for video verification access, by combining access control with existing video devices. The dedicated readers are configured for verification mode by a checkbox in the configuration.*

(ii) *Instead of opening the door immediately when an authorized card is presented, the reader/controller shall generate an event at the ISS. The reader shall be identified in the location map displayed provided, and a corresponding alarm document displays the stored image of*

the cardholder along with a live video image from the corresponding door. The operator shall determine if both images match, he can decide to open the door or to deny the access.

(ac) Mantrap - *Mantrap function shall be provided to allow management of two or more interlocking doors controlled by two pairs or more of readers (in/out), or entrance readers and request to exit buttons. Only one door can open at a time. As long as one door is opened, the rest shall be blocked for access.*

(ad) Protocol Authorisation- *The ISS AS provided shall support the decision of administrator to set the layers of authentication protocol.*

(ae) Parking Lot Management – *The ISS AS provided shall allow the administration and control of parking lots, including the administration of the access authorization and the control of barriers and traffic lights. The system shall provide the possibility to limit the number of vehicles inside a parking lot so that a balancing is possible, and the traffic lights are controlled accordingly.*

(af) Random Screening - The ISS AS shall be able to perform an additional security check by the officer on duty at the site/building exits. The readers at such exits are easily set to that mode by checking a checkbox and setting the frequency. At Random, the selected door should not open, but an event shall be triggered at the ISS monitoring workstation with all the corresponding location maps and alarm documents. Upon receiving the message, shall remind the operator/guard to check the cardholder and his pockets/bags. After which, he can open the door manually by clicking on the door icon inside the location map.

(ag) Time and Attendance Data – The ISS AS provided shall support access control readers as time and attendance readers. The booking events are stored in the central event log. The event log supports the filtering for such events and the export into standard CSV format text files for use in other applications.

(ah) Access Control Management Alarms and Events – The ISS AS shall provide a wide range of standard alarm and event states. The following alarms/events, but not limited to, shall be supported:

- (i) Card unknown
- (ii) Card not authorized
- (iii) Card outside time profile
- (iv) Card anti-pass back
- (v) Access timeout
- (vi) Door open time exceeded
- (vii) Door opened unauthorized.
- (viii) Door blocked
- (ix) Tamper alarm controller
- (x) Tamper alarm reader
- (xi) PIN code error
- (xii) Duress alarm code
- (xiii) Access denied
- (xiv) Wrong card version
- (xv) Card blocked
- (xvi) Card blacklisted
- (xvii) Card out route
- (xviii) Guard tour alarms
- (xix) Random screening
- (xx) Other individual alarm extensions
- (xxi) Power and Hardware failure Alarm

(aj) All alarm/events have to be logged in the central ISS event log database together with all assigned alarm documents for a complete reporting.

(ak) The ISS AS provided shall have support for central alarm monitoring and management. It shall also provide a wide range of display and control features. It shall provide a graphical user interface (GUI) that has the same look and feel regardless of which alarm is activated and received.

(al) Creation of individual authorizations per operator or operator group shall be possible. This includes, but not limited to:

(i) Selectable displaying, monitoring, and control of locations, such as individual floor, building, or site permissions.

(ii) Selectable displaying, monitoring, and control of system component.

(iii) Selectable displaying, monitoring, and control of detector points, such as readers, doors, or cameras.

(am) The ISS AS shall provide practicable central configuration platform or tool from where everything concerning system behaviour, such as access control cardholder settings, display features, and authorizations are set up.

(an) The ISS AS shall provide an easy and intuitive way of defining/designing the system behaviour of alarms or events when they activate. It shall provide and allow system administrator during configuration with the use of 'IF' and 'THEN' and 'ELSE' or similar conditional functions to define the behaviour of individual or groups of alarm/event.

(ao) System administrator shall be able to use Microsoft Excel spreadsheet as a tool to create the alarm definitions template if large and/or similar configurations are needed. The template shall be then imported to the ISS.

(ap) The ISS AS shall securely log all events, alarm activations and operator's actions/responses into the alarm/event log database, so to prevent after-the-fact changes, and to protect data from any manipulation.

(aq) The events log database shall include an advanced filter functions such that archive can be kept small and precise. If required, only desired information shall be archived.

(ar) The archived shall be allowed export in a standard CSV format text file for additional processing in other applications.

(as) The ISS AS shall be capable for directly importing of site/building floor plan drawings or maps that are of standard vector graphics format, such as Auto CAD DWF, used for indicating meaningful location of the alarm activation in the GUI.

(at) The drawing format for the location maps shall support a logical partitioning by defining sub-areas inside the drawing, by marking the area and giving it a logical name.

(au) Administrator Authorised Control of Sub Control Rooms from main Command and Control Centre.

(av) One Extended Terminal from the main command and control centre to the Administrator.

(aw) A location tree and the location names shall be provided for in the GUI. Creation of the location tree and the location names shall simply by scanning the drawings for the pre-defined logical sub-area.

(ax) The ISS AS shall support multi-layered drawings and allows layers to be shown or hidden in the GUI depending on the incoming event. For example, this allows the display of escape routes and fire extinguisher locations when there is a fire alarm. A manual layer control during normal operation shall also be provided.

(ay) Time-consuming conversion into a bitmap format and the splitting into sections shall be avoided. In the case of structural changes inside the drawing (new walls, doors, and so on), no changes shall be necessary in the ISS configuration.

(az) The ISS AS shall provide a library of standard detector icons for doors, readers, door sensors, detectors, cameras, and so on. System administrator shall be able to place these icons directly onto the drawing. All assigned control commands are provided when clicking the icon.

(ba) The location and the relative size of an icon shall be pre-definable in the drawing, prior to importing into the ISS. In this case, it will save the system administrator's time during configuration, as it could be done by the architect or draftsman.

(bb) The ISS AS shall provide timer and schedule functions to support, but not limited to the following:

- (i) Time based display of information*
- (ii) Time based automatic controls*
- (ii) Time based access.*

(bc) The timer provided shall supports time frames per weekday, public holidays, and individual programmable special days as desired by the user.

(bd) The ISS AS shall allow the manual and automatic printing of all alarm related documents, including location maps, instructions, and alarm details, such as location, detector address, and type.

(be) Printing of all query based reports including entry and exit of employees, visitors & vehicle management.

(bf) The ISS AS shall support any standard laser or inkjet printer that comes with a Window-compliant printer driver for use as an alarm printer. The printers shall be connectable directly to a workstation or to the network.

(bg) ISS shall allow the integration of imported data of proximity/contactless/RFID Cards.

Server Structure and System Architecture.

(a) The ISS server shall be provided with dual redundant Centralprocessing Units (CPUs) and shall be structured based on centralized or distributed server architecture.

(b) The dual redundant CPU provided for the ISS server shall be reliable and robust in construction to perform all the necessary functions as described in this document relative to the management of all sub-systems.

(c) The dual redundant shall be micro-processor based, completed with adequate disk storage to service the total system requirements and shall be of an industrial standard type, having proven record in similar applications.

(d) In the event if one (1) CPU fails, the other CPU shall automatically takes over the task from the first immediately without having any downtime observed. The system shall provide a 99.999% rate of availability.

(e) The tenderer shall design and decide depending on the occurring load, the ISS to run on one or more servers operating as one system. One of these servers shall operate as the central or main server to the other. The operating system shall preferably be Windows 2008 server or Windows 7.

(f) Database for ISS shall reside within the same server hardware. However, it shall be possible to also separate the ISS application software and its database should it be necessary.

(g) The ISS server hardware provided shall be of industrial EIA standard 19-inch rack mountable.

(h) All alarms processing, logging, operator's response, data entry/input, graphical user interface and other system operations and management functions shall be performed at the ISS workstations connected to the ISS network. The operating system shall preferably be Windows 2008 or Windows 2007.

(j) All ISS servers and workstations shall be connected using a standard IP network over the corporate Intranet or dedicated Internet/LAN/WAN. It shall also support the use of wireless connection of mobile workstations, like laptop PC.

(k) The ISS shall have a multi-level priority interrupt structure proven in multi-tasking and multi-client real time applications. Simultaneous alarms/events monitoring by multiple users, system supervision and history archiving shall be possible without degradation of any functionality specified system or operation.

(m) The supported multi-client application shall have the capability that separates message distribution to dedicated operator or operator groups whom are permitted to operate on those alarms or events. These shall include, but not limited to:

- (i) Individual display of locations/location maps*
- (ii) Individual access to subsystems*
- (iii) Individual control into subsystems*
- (iv) Individual assignment of access hardware to different/separate sub-area.*

(n) The ISS shall provide the flexibility to use only single or same username and password for both MS Windows and ISS login at the workstation. It shall be an advantage if the system can allow the option for utilizing MS Windows Domain login username and password for direct log in to ISS, such that double login can be avoided.

(o) The ISS shall allow the configuration for information access permissions, that is, user/operator profile for the access on the master records and/or event data, the permissions shall restrict to:

- a. Read only*
- b. Read and write*
- c. Read, write and change*
- d. Read, write, change and delete*

(p) The ISS server shall be protected against unauthorized access via firewall.

- (q) *Communication and/or data exchange between the ISS servers and all connected workstations shall be encrypted with at least 128-bit data encryption according to a certified algorithm.*
- (r) *The ISS shall be able to provide and display the operating status of all servers and workstations/operators.*
- (s) *The ISS system shall be designed such that any failure of any sub-systems shall not affect all the other sub-systems. This shall also apply to any loss of power supply or suffer a loss in communications due to a break in the communication loop. In any case, each sub-system shall continue to function in a fully operational state with no loss of functionality.*
- (t) *In the event of network communication failure between ISS servers and workstations, all access control components and sub-systems shall continue to operate and be able to function independently. Once the network communication is re-established, individual access control sub-system controller and/or server shall automatically synchronized its transactions during the network downtime to the ISS servers, without affecting the normal operation of the system.*
- (u) *The ISS server shall act as the source that provides time synchronization to all sub-systems.*
- (v) *The ISS shall have a modular structure that allow for future system expansion with minimum cost and disruption to the existing operational system. Such upgrade shall not make use of or compromise the spare requirement specified or utilizing or sharing any of its functions.*
- (w) *The ISS shall be expandable to support an unlimited number of integrated operator workstations.*
- (x) *The ISS shall be able to make use of the existing open protocol drivers software available running on any PC installed inside the corporate network, avoiding additional re-installing of the same application.*
- (y) *The ISS shall provide a Remote Control Interface (RCI) for interfacing by other sub-systems, such as SCADA (Supervisory Control And Data Acquisition) or BAS (Building Automation System) to acquire and monitor the status of all the security sub-systems connected to the ISS.*
- (z) *The RCI shall allow the possibility for control of selected functions in the ISS sub-system remotely from SCADA or BAS operator work stations.*

37. **Graphical User Interface.**

Number Required - 01 Lot

Specification

(a) *The ISS Graphical User interface (GUI) shall be of browser based using standard Hyper Text Mark-up language (HTML) format, no separate software shall be required at each operator workstation for purpose of system alarms/events monitoring and operation.*

(b) *The ISS GUI shall support single or multi screen displays having multiple HTML pages separately over a maximum of four (4) monitors per workstation by using a corresponding video graphics card.*

(c) *The ISS shall provide a default GUI that is adequate and ready for used in normal system operation. It shall support at least the following standard resolutions; 1024x768, 1280x1024 (1-monitor operation), 2048x768 and 2560x1024 (2-monitor operation).*

(d) *The ISS GUI shall allow easy customization using standard HTML editor, to create a favourable look and feel that is unique to the user, yet contains all interface control functions provided as in the default GUI.*

(d) *The possible ISS GUI customizations shall include, but not limited to the following:*

(i) *Inclusion of corporate logo(s)*

(ii) *Integration of corporate images as wallpaper*

(iii) *Provision of individual contents to each operator or operators group. An operator logging in to the system shall be automatically be detected and the ISS shall supply the right contents and display resolution pre-assigned to him.*

(iv) *Provision of individual contents corresponding to the workstation.*

(e) *The ISS GUI shall provide and display a complete overview of the operating status of all servers, workstations/operators, all the connected sub-systems, all panels and even the status of individual detectors, should be available at main control room and at the building specific control rooms.*

(f) *All connected system components shall be shown on the status tree where direct control shall be possible by clicking on the icon or detector address.*

- (g) *The device overview shall support state filtering and/or sorting function to search for specific device status, such as all detectors having malfunction state or all doors in opened state. The states indicated in the device overview shall reflect exactly the same colour as the detector icon shown in the location map.*
- (h) *Besides the status tree, the ISS GUI shall have a location tree to allow easy selection of locations and sub-locations, such as single floors or rooms. The location tree shall have no limits in the number of levels or sub-levels.*
- (i) *Along with the location tree, the ISS GUI shall display the location map that is in the standard vector graphics format.*
- (j) *At the location tree, a single click on the location or sub-location shall show the assigned map or sub-areas with all detector icons visible for the area.*
- (k) *The ISS GUI shall provide a zoom and pan feature for zooming into a location and move around inside the map, simply by using a standard PC mouse. It shall enable operators to find a specific detector, door, or reader for fast control, such as open door manually, switch on/off lights, show camera live image, and so on.*
- (l) *All icons shall be provided in a vector format, such that when the operator performing zoom-in or out of the map, the icon size scales automatically to the view.*
- (m) *Moving the mouse cursor over a detector icon provides a tool tip with detailed detector information, such as complete address, actual status, and detector type.*
- (n) *In the event of alarm activation, the alarm message shall be displayed at the destined ISS operator workstation together with an external audible siren or via PC internal speaker. The detector that triggers the alarm, the relative icon found in the location map shall change its colour and status graphically, reflecting to the state of the corresponding alarm or event. For example, a red colour opened door icon shall be displayed when the door is physically forced opened or the colour of the icon shall change from green-normal to re-alarm instantly if the detector point is violated. A captive screen will bring the site of incidence on to focus for immediate attention of operator.*
- (o) *For the alarm sound generated from the PC internal speaker, standard formats such as WAV, MP3 or WMA shall be supported and selectable for assigning to individual alarm/event or groups of alarms/events during system configuration.*

(p) *The ISS GUI shall provide and display once the alarm message is being acknowledged, an action plan, that is, instructions to operator a miscellaneous document.*

(q) *The alarm/event action plan and miscellaneous document shall support the integration and display of bitmap picture/s, live video/s from relative camera/s, form elements (example checkboxes and tables) as used in Microsoft Office to create specific forms, customizable control buttons to control system components directly, and/or any combination of these items.*

(r) *The alarm/event document's format shall utilize open standards, which would allow the user to create and configure using standard editors.*

(s) *The alarm/event action plan and miscellaneous document shall be assignable to specific alarm/location to display information when an alarm or event is generated from that pre-defined location.*

(t) *In order to minimize the use of too many different alarm action plans and documents, and for easy system management, the ISS AS shall support macros which can be dynamically substituted by the real alarm or event data when displayed. However, this shall not become the limitation on the number of alarm/event action plans and miscellaneous documents that can be created.*

38. ISS Alarm Handling and Management.

Number Required - 01 Lots

Specification

(a) *The ISS shall provide the operator a simple and efficient way to handle any incoming alarms.*

(b) *Only authorized operator with the valid login username and password shall be able to access and operate the system. Once successfully login, the operator shall only see all the alarm and event messages destined to him for monitoring and processing based on his user login access profile.*

(c) *The operator shall be able at the ISS workstation acknowledge/accept, response to incoming alarms or event messages. He shall only be allowed to delete the alarm or event message after it has been acknowledge/accepted.*

(d) All alarm and event messages received at the authorized ISS workstation shall be queued according to their pre-defined priority settings.

(e) The ISS shall be able to handle up to 5000 alarms/events simultaneously.

(f) All incoming alarms at the ISS GUI workstation shall contain a comprehensive alarm message, blinking icon representing new alarm, graphical map showing alarm location with flashing icon associated with the alarm, and an audible alarm/buzzer.

(g) The incoming alarm or event message shall provide, but not limited to, the following information:

(i) Alarm date and time

(ii) Alarm status

(iii) Current alarm condition

(iv) Detector/input name/address

(v) Alarm location

(vi) Message priority

(vii) Operator login name, who acknowledged the alarm/event message.

(h) The operator shall be able to silence the audible alarm sound or buzzer for the pre-defined time by clicking on an icon provided, while he is busy processing earlier alarms. The sound/buzzer shall re-activate to re-alert him once the pre-defined time expires.

(i) After the operator acknowledged the alarm/event, the relative alarm/event predefined action plan or to-do-list shall display at the ISS workstation depending on the alarm/event type. This action plan provided is to guide or give the operator instructions and/or options what to do with the specific alarm/event activation.

(j) Besides the action plan provided, the operator shall also see a miscellaneous document displayed with the action plan at the same time. This document shall contain additional information, remarks/notes related to the specific alarm that is informative to the operator. This information for example, shall contain access card holder's details, picture/s or trouble-shooting procedures for malfunction alarm. It shall also show live video images from the CCTV camera installed at the alarm location such that, the operator can have first time view of the site situation if required. A captive screen will bring the site of incidence on to focus for immediate attention of operator.

- (k) *The predefined alarm/event action plan and miscellaneous document shall be displayed following operator acknowledgement of the alarm/event message. They shall provide, at least the following information:*
- (i) *Alarm or event date and time*
 - (ii) *Alarm or event status*
 - (iii) *Alarm or event location*
 - (iv) *Detector/input type and its name/address*
 - (v) *Detailed instruction and to-do-list to guide the operator*
- (l) *When the alarm/event message is acknowledged and accepted by the operator, the ISS shall log into database the operator's name, date and time of the acknowledgement for the specific message, for purpose of accountability.*
- (m) *The operator shall be allowed to revert or toggle between all alarms or events messages he had already acknowledged. The relative graphical alarm location map, action plan and miscellaneous document attached to the selected message shall follow and toggle automatically.*
- (n) *If in the event that an alarm or event message is left unaccepted by the destined operator after a pre-defined, it shall be automatically by configuration, be forwarded to the next authorized operator or groups of operators.*
- (o) *There shall not be a limitation to the number of levels that the unaccepted message can be forwarded or escalated from one workstation to another until it is finally being acknowledged.*
- (p) *When required or during emergency, the operator shall be able to activate the alarm manually from the workstation. The operator shall only need to select and click on the relevant location and/or device icon and if required, enters the specific alarm code. When the alarm activates, the behaviour shall be identical to that of an actual alarm triggered from the detector/s, the alarm message and relative assigned documents and location map shall be displayed.*
- (q) *The ISS operator shall also be able to send remote commands or activate controls manually from the workstation when requested such as, unlocking and re-locking of access controlled door/s, or resetting of detectors.*
- (r) *The operator shall be allowed based on his login access profile generate alarm and event reports from his operating workstation.*
- (s) *SMS Service. A provision for SMS flash to select user (up to 200) will be incorporated as part of the system.*

RFP No. 01/2012

Technical Bid for Integrated Security System (ISS)

1.	Tender to be addressed to.	The President of India
2.	Tender to be submitted to	JS (Trg) & CAO, Min of Def, E- Block Hutments, Dalhousie Road, New Delhi-11.
3.	Closing date and time for receipt of Tenders.	1300 hrs on
4.	Time, date & place of opening of Tender	1500 hrs on..... in the office of JS (Trg) & CAO, Min of Def, E- Block Hutments, Dalhousie Road, New Delhi-110011
5.	Earnest Money deposited	Rs. 10,00,000/- (Rs. Ten lacs only) DD/Banker's cheque/FDR/ Bank Guarantee
6.	Terms & Conditions as contained in the chapter II of the RFP	ACCEPTED
7.	Bank solvency certificate (issued not earlier than 01 Jan 2014)	Attached/ Not attached
8.	Documents showing Turnover of Rs. 01 Crore during the last 03 Financial Years i.e. FY 2010-11, 2011-12 and 2012-13	Supportive Documents: Enclosed/ Not enclosed
9.	Authenticated copy of PAN	Enclosed / Not enclosed
10.	Tender Bid valid for acceptance up to 120 days wef date of opening of Tender	Accepted / Not Accepted
11.	Capacity in which the Tender is signed by the Tenderer	

Signature of Tenderer _____
Name in Block letters _____
Date _____
Stamp of the Firm _____

Chapter-3

STANDARD CONDITIONS OF RFP

1. Eligibility for Bidding:

(a) The bidder/firm should have a gross turn-over of not less than Rs. 01 crores during the last three financial years *v.i.z* *FY 2010-11, 2011-12 & 2012-13*.

(b) A 'Bank Solvency Certificate' issued not before 01 January 2014 should be attached with the 'Technical Bid' failing which the tender will not be considered.

2. Effective Date of Contract: The contract shall come into effect on the date of signatures of both the parties on the contract (Effective Date) and shall remain valid until the completion of the obligations of the parties under the contract. The deliveries and supplies and performance of the services shall commence from the effective date of the contract.

3. Arbitration clause: All disputes or differences arising out of or in connection with the Contract shall be settled by bilateral discussions. Any dispute, disagreement or question arising out of or relating to the Contract or relating to construction or performance, which cannot be settled amicably, may be resolved through arbitration. The standard clause of arbitration is as per Forms DPM-7, DPM-8 and DPM-9 (Available in MoD website and can be obtained on request).

4. Penalty for use of undue influence: The seller undertakes that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the Buyer or otherwise in procuring the contracts or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the present Contract or any other Contract with the Government of India for showing or forbearing to show favour or disfavor to any person in relation the present Contract or any other Contract with the Government of India. Any breach of the aforesaid undertaking by the Seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the Seller) or the commission of any offence by the Seller or any one employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1986 or any other Act enacted for the prevention of corruption shall entitle the Buyer to cancel the contract and all or any

other contracts with the Seller and recover from the Seller the amount of any loss arising from such recover from the Seller the amount of any loss arising from such cancellation. A decision of the Buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the Seller towards any officer/employee of the Buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the bank Guarantee and refund of the amount paid by the Buyer.

5. **Agents/Agency Commission:** The Seller confirms and declares to Buyer that the Seller is the original provider of the services referred to in this contract and has not engaged any individual or firm, whether Indian or foreign what so ever, to intercede, facilitate or in any way to recommend to the Government of India or any of its functionaries, whether officially or unofficially, to the award of the contract to the Seller, nor has any amount been paid, promised or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation. The Seller agrees that if it is established at any time to the satisfaction of the Buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that the Seller has engaged any such individual/firm, and paid or intended to pay any amount, gift, institution, whether before or after the signing of this contract, the Seller will be liable to refund that amount to the Buyer. The Seller will also be debarred from entering into any supply Contract with the Government of India for a minimum period of five years. The Buyer will also have a right to consider cancellation of the Contract either wholly or in part, without any entitlement or compensation to the Seller who shall in such an event be liable to refund all payments made by the Buyer in terms of the Contract along with interest all the rate of 2% per annum above LIBOR rate. The Buyer will also have the right to recover any such amount from any contracts concluded earlier with the Government of India.

6. **Access to Books of Accounts:** In case it is found to the satisfaction of the Buyer that the seller has engaged an Agent or paid commission or influenced any person to obtain the contract as described in clauses relating to Agents/Agency Commission and penalty for use of undue influence, the Seller, on a specific request of the Buyer, shall provide necessary information/inspection of the relevant financial documents/information.

7. **Non-disclosure of Contract documents:** Except with the written consent of the Buyer/Seller, other party shall not disclose the contract or any provision, specification, plan, design, pattern, sample or information thereof to any third party.

8. **Quantum of Liquidated Damage (LD):** If the contractor fails to submit the Bonds, Guarantees and Documents, supply the stores/goods and conduct trials, installation of equipment, training, etc. as specified in this contract, the Buyer may, at this discretion, withhold any payment until the completion of the contract. The BUYER may also deduct from the SELLER as agreed, liquidated damages to the sum of 0.5% of the contract price of the delayed/undelivered stores/services mentioned above for every week of delay or part of a week, subject to the maximum value of the Liquidated Damages being not higher than 10% of the value of delayed stores.

9. **Termination of Contract:** The Buyer shall have the right to terminate this Contract in part or in full in any of the following clause:-

(a) The delivery of the material is delayed for causes not attributable to Force Majeure for more than two months after the scheduled date of delivery.

(b) The Seller is declared bankrupt or becomes insolvent.

(c) The delivery of material is delayed due to causes of Force Majeure by more than four months provided Force Majeure clause is included in contract.

(d) The Buyer has noticed that the Seller has utilized the services of any Indian /Foreign agent in getting this contract and paid any commission to such individual/company etc.

(e) As per decision of the Arbitrator Tribunal.

10. **Notices:** Any notice required or permitted by the contract shall be written in the English language and may be delivered personally or may be sent by FAX or registered pre-paid mail/airmail, addressed to the last known address of the party to whom it is sent.

11 **Transfer and Sub-letting:** The Seller has no right to give, bargain, sell, assign or sublet or otherwise dispose of the contract or nay part thereof, as well as to give or to let a third party take benefit or advantage of the present Contract or any part thereof.

12. **Patents and other Industrial Property Rights:** The prices stated in the present Contract shall be deemed to include all amounts payable for the use of patents, copyrights, registered charges, trademarks and

payments for any other industrial property rights. The Seller shall indemnify the Buyer against all claims from a third party at any time on account of the infringement of any or all the rights mentioned in the previous paragraphs, whether such claims arise in respect of manufacture or use. The Seller shall be responsible for the completion of the supplies including spares, tools, technical literature and training aggregates irrespective of the fact of infringement of the supplies, irrespective of the fact of infringement of any or all the rights mentioned above.

13. **Amendments:** No provision of present Contract shall be changed or modified in any way (including this provision) either in whole or in part except by an instrument in writing made after date of this Contract and signed on behalf of both the parties and which expressly states to amend the present Contract.

14. **Taxes and Duties:**

In respect of Indigenous bidders:

(i) General

1. If Bidder desires to ask for excise duty or Sales Tax/VAT extra, the same must be specifically stated. In the absence of any such stipulation, it will be presumed that the prices include all such charges and no claim for the same will be entertained.

2. If reimbursement of any Duty/Tax is intended as extra over the quoted prices, the Bidder must specifically say so. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of such duty/tax will be entrained after the opening of tenders.

3. If a Bidder chooses to quote a price inclusive of any duty/tax and does not confirm inclusive of such duty/tax so included is firm and final, he should clearly indicate the rate of such duty/tax and quantum of such duty/tax included in the price. Failure to do so may result in ignoring of such offers summarily.

4. If a Bidder is exempted from payment of any duty/tax upto any value of supplies from them, he should clearly state that no such duty/tax will be charged by him up to the limit of exemption which he may have. If any concession is available in regard to rate/quantum of any Duty/tax, it should be brought out clearly. Stipulations like, the said Duty/tax was presently not applicable but the same will be charged if it becomes leviable later on, will not be accepted unless in such cases it is clearly stated by a Bidder that such duty/tax will not be charged by him even if the same becomes applicable later on. In respect of the Bidders, who fail to comply with this requirement, their quoted prices shall be loaded with the quantum of such duty/tax which is normally applicable on the item in question for the purpose of comparing their prices with other Bidders.

5. Any change in any duty/tax upward/downward as a result of any statutory variation in excise taking place within contract terms shall be allowed to the extent of actual quantum of such duty/tax paid by the supplier. Similarly, in case of downward revision in any duty/tax, the actual quantum of reduction of such duty/tax shall be reimbursed to the Buyer by the Seller. All such adjustments shall include all reliefs, exemptions, rebates, concession etc. if any obtained by the Seller.

(ii) Excise Duty

1. Where the excise duty is payable on advalorem basis, the Bidder should submit along with the tender, the relevant form and the Manufacturer's price list showing the actual assessable value of the stores as approved by the Excise authorities.

2. Bidders should note that in case any refund of excise duty is granted to them by Excise authorities in respect of stores supplied under the contract, they will pass on the credit to the Buyer immediately along with a certificate that the credit so passed on relates to the Excise Duty, originally paid for the stores supplied under the contract. In case of their failure to do so, within 10 days of the issue of the excise duty refund orders to them by the Excise Authorities the Buyer would be empowered to deduct a sum equivalent to the amount refunded by the Excise Authorities without any further reference to them from any of their outstanding bills against the contract or any other pending Government contract and that no disputes on this account would be raised by them.

3. The Seller is also required to furnish to the paying authority the following certificates:

(a) Certificate with each bill to the effect that no refund has been obtained in respect of the reimbursement of excise duty made to the Seller during three months immediately preceding the date of the claim covered by the relevant bill.

(b) Certificate as to whether refunds have been obtained or applied for by them or not in the preceding financial year after the annual Audit of their accounts also indicating details of such refunds/applications, if any.

(c) A certificate along with the final payment bills of the Seller to the effect whether or not they have any pending appeal/protest for refund or partial refund of excise duties already reimbursed to the Seller by the Government pending with the Excise authorities and if so, the nature, the amount involved, and the position of such appeals.

(d) An undertaking to the effect that in case it is detected by the Government that any refund from Excise Authority was obtained by the Seller after obtaining reimbursement from the paying authority, and if the same is not immediately refunded by the Seller to the paying authority giving details and particulars of the transactions, paying authority will have full authority to recover such amounts from the Seller's outstanding bills against that particular contract or any other pending Government contracts and that no dispute on this account would be raised by the Seller.

4. Unless otherwise specifically agreed to in terms of the contract, the Buyer shall not be liable for any claim on account of fresh imposition and/or increase of Excise Duty on raw materials and/or components used directly in the manufacture of the contracted stores taking place during the pendency of the contract.

(iii) Sales Tax/VAT

1. If it is desired by the Bidder to ask for Sales tax/VAT to be paid as extra, the same must be specifically stated. In the absence of any such stipulation in the bid, it will be presumed that the prices quoted by the Bidder are inclusive of sales tax and no liability of sales tax will be developed upon the Buyer.
2. On the Bids quoting sales tax extra, the rate and the nature of Sales Tax applicable at the time of supply should be shown separately. Sales tax will be paid to the Seller at the rate at which it is liable to be assessed or has actually been assessed provided the transaction of sale is legally liable to sales tax and the same is payable as per the terms of the contract.

(iv) Octroi Duty & Local Taxes

1. Normally, materials to be supplied to Government Departments against Government contracts are exempted from levy of town duty, Octroi Duty, Terminal Tax and other levies of local bodies. The local Town/Municipal Body regulations at times, however, provide for such Exemption only on production of such exemption certificate from any authorized officer. Seller should ensure that stores ordered against contracts placed by this office are exempted from levy of Town Duty/Octroi Duty, Terminal Tax or other local taxes and duties. Wherever required, they should obtain the exemption certificate from the Buyer, to avoid payment of such local taxes or duties.
2. In case where the Municipality or other local body insists upon payment of these duties or taxes the same should be paid by the Seller to avoid delay in supplies and possible demurrage charges. The receipt obtained for such payment should be forwarded to the Buyer without delay together with a copy of the relevant act or bylaws/notifications of the Municipality of the local body concerned to enable him to take up the question of refund with the concerned bodies if admissible under the said acts or rules.

15. Time Frame for completion of the project:

The entire project is required to be completed by the successful bidder in maximum of 06 months. The firm should come out with the details of implementation of the project in various stages. The payment shall be released as spelt out at para 3 (a) under the Head 'Payment Terms' 'Special Conditions of RFP' in Chapter-4.

Chapter-4

SPECIAL CONDITIONS OF RFP

The Bidder is required to give confirmation of their acceptance of Special Conditions of the RFP mentioned below which will automatically be considered as part of the Contract concluded with the successful Bidder (i.e. Seller in the contract) as selected by the Buyer. Failure to do so may result in rejection of Bid submitted by the Bidder.

1. Performance Guarantee:

The Bidder will be required to furnish a Performance Guarantee by way of Bank Guarantee through a public sector bank or a private sector bank authorized to conduct government business (ICICI Bank Ltd., Axis Bank Ltd or HDFC Bank Ltd.) in favour of the President of India through the JS (Trg) & CAO, MOD, New Delhi for a sum equal to 10% of the contract value within 30 days of receipt of the confirmed order. Performance Bank Guarantee should be valid upto 60 days beyond the date of warranty. The specimen of PBG is given in Form DPM-15 (Available in MOD website and can be provided on request.

2. **Payment Terms** : It will be mandatory for the Bidders to indicate their bank account numbers and other relevant e-payment details so that payments could be made through ECS/EFT mechanism instead of payment through cheques, wherever feasible. A copy of the model mandate form prescribed by RBI to be submitted by Bidders for receiving payments through ECS is at Form DPM-11 (Available in MoD website and can be given on request). The payment will be made as per the following terms, on production of the requisite documents:

(a) Stage-wise payments : The entire contract shall be divided into 03 stages. On completion of each stage and submission of user clearance certificate for the same, 90% of the payment will be released. The balance 10% of the payment shall be released after completion of entire contract.

3. **Advance Payments**: No advance payment (s) will be made.

4. **Paying Authority:**

The payment of bills will be made on submission of the following documents by the Seller to the Paying Authority along with the bill:

- (i) Ink-signed copy of contingent bill/Seller's bill
- (ii) Ink-signed copy of Commercial invoice/Seller's bill.
- (iii) Copy of Supply Order/Contract with U.O. number and date of IFA's concurrence, where required under delegation of powers.
- (iv) CRVs in duplicate.
- (v) Inspection Note.
- (vi) Claim for statutory and other levies to be supported with requisite documents/proof of payment such as Excise duty challan, Customs duty clearance certificate, Octroi receipt, proof of payment for EPF/ESIC contribution with nominal roll of beneficiaries, etc as applicable.
- (vii) Exemption certificate for Excise duty/Customs duty, if applicable.
- (viii) Gurantee/Warranty Certificate.
- (ix) Performance Bank Guarantee/Indemnity bond where applicable.
- (x) Details for electronic payment viz Account holder's name, Bank name, Branch name and address, Account type, Account number, IFSC code, MICR code (if these details are not incorporated in supply order/contract).
- (xi) User Acceptance.
- (xii) Xerox copy of PBG.

(Note- From the above list, the documents that may be required depending upon the peculiarities of the procurement being undertaken, may be included in RFP)

5. **Force Majeure clause:**

a. Neither party shall bear responsibility for the complete or partial non performance of any of its obligations (except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the present contract), if the non-performance results from such Force Majeure circumstances as Flood, Fire, Earth Quake and other acts of God as well as War, Military operation, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after the conclusion of the present contract.

b. In such circumstances the time stipulated for the performance of an obligation under the present contract is extended correspondingly for the period of time of action of these circumstances and their consequences.

c. The party for which it becomes impossible to meet obligations under this contract due to Force Majeure conditions, is to notify in written form the other party of the beginning and cessation of the above circumstances immediately, but in any case not later than 10 (Ten) days from the moment of their beginning.

d. Certificate of a Chamber of Commerce (Commerce and Industry) or other competent authority or organization of the respective country shall be a sufficient proof of commencement and cessation of the above circumstances.

e. If the impossibility of complete or partial performance of an obligation lasts for more than 6 (six) months, either party hereto reserves the right to terminate the contract totally or partially upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in the agreement for the goods received.

6. **Specification:** The following Specification clause will form part of the contract placed on successful Bidder – The Seller guarantees to meet the specifications as per Part-II of RFP and to incorporate the modifications to the existing design configuration to meet the specific requirement of the Buyer Services as per modifications/requirements recommended after the Maintenance Evaluation Trials. All technical literature and drawings shall be amended as the modifications by the Seller before supply to the Buyer. The Seller, in consultation with the

buyer, may carry out technical upgradation/alterations in the design, drawings and specifications due to change in manufacturing procedures, indigenisation or obsolescence. This will, however, not in any way, adversely affect the end specifications of the equipment. Changes in technical details, drawings repair and maintenance techniques alongwith necessary tools as a result of upgradation/alterations will be provided to the Buyer free of cost within **(30)** days of affecting such upgradation/alterations.

7. **OEM Certificate:**

In case the Bidder is not the OEM (Original Equipment Manufacturer), the agreement certificate with the OEM for sourcing the spares shall be mandatory. However, where OEMs do not exist, minor aggregates and spares can be sourced from authorized vendors subject to quality certification.

Authorization Letter from OEM in their original letter head addressed to the O/o JS(Trg) & CAO to support the offered hardware, Software and spares and accessories being provided by them for the project and offer their support during the warranty period of 18 months and CAMC period of 07 years shall be submitted alongwith the tender bid as per the proforma given below :

To
The Office of JS(Trg) & CAO
Ministry of Defence
E-Block Hutments
New Delhi – 110011

Dated :

Subject : Manufacturer's Authorization Certificate

Reference : Tender for Integrated Security System (ISS) in building of Ministry of Defence at New Delhi RFP No.1/2013
No.A/48932/ISS/CAO/MP-III

Dear Sir,

This is with reference to the above mentioned Tender; we hereby authorize M/s _____ to offer our range of product in their tender bid.

We as a manufacturer will provide all the support necessary to M/s _____ for this project. We also state that the items *viz** _____ quoted in the tender are in regular production line and would be serviceable during the warranty period of 18 months and for at least seven years thereafter during the period of Comprehensive Annual Maintenance Contract (CAMC).

(Authorised signatory of OEM)

* **Hardware**: For the following items the **OEM Authorization Certificate** is mandatory:

1. IP CCTV Camera (Fixed & PTZ)
2. Access Modular Controller
3. Smart Biometric Card
4. Smart Card Reader (Biometric)
5. RFID Reader
6. Boom Barrier
7. Blocking Bollards
8. Tripod Turnstile
9. Flap Barrier
10. Door Frame Metal Detector
11. Under Vehicle Surveillance System
12. Automated Number Plate Recognition System
- 13. Hand Held Explosive Detector**

* **Software** :The license and authenticated code generated by the OEM for a particular software shall be treated as certificate of authorization.

8. **Earliest Acceptable Year of Manufacture:** 2013
Quality / Life certificate will need to be enclosed with the Bill.

9. **Quality:** The quality of the stores delivered according to the present Contract shall correspond to the technical conditions and standards valid for the deliveries of the same stores for in Seller's country or specifications enumerated as per RFP and shall also include therein modification to the stores suggested by the Buyer. Such modifications will be mutually agreed to. The Seller confirms that the stores to be supplied under this Contract shall be new i.e. not manufactured before (Year 2013), and shall incorporate all the

latest improvements and modifications thereto and spares of improved and modified equipment are backward integrated and interchangeable with same equipment supplied by the Seller in the past if any. The Seller shall supply an interchangeability certificate along with the changed part numbers wherein it should be mentioned that item would provide as much life as the original item.

10. **Quality Assurance:** Seller would provide the Standard Acceptance Test procedure (ATP) within **01** month of this date of contract. Buyer reserves the right to modify the ATP. Seller would be required to provide all test facilities at his premises for acceptance and inspection by Buyer. The details in this regard will be coordinated during the negotiation of the contract. The item should be of the latest manufacture, conforming to the current production standard and having 100% defined life at the time of delivery.
11. **Inspection Authority:** The inspection will be carried out by a duly constituted monitoring committee. The mode of inspection will be Joint Inspection & User Inspection.
12. **Franking clause** The following Franking clause will form part of the contract placed on successful Bidder-
 - a. **Franking Clause in the case of Acceptance of Goods** “ The fact that the goods have been inspected after the delivery period and passed by the inspecting Officer will not have the effect of keeping the contract alive. The goods are being passed without prejudice to the rights of the Buyer under the terms and conditions of the contract”.
 - b. **Franking Clause in the case of Rejection of Goods** “ The fact that the goods have been inspected after the delivery period and rejected by the inspecting Officer will not bind the Buyer in any manner. The goods are being rejected without prejudice to the rights of the Buyer under the terms and conditions of the contract.”
13. **Claims:** The following Claims clause will form part of the contract placed on successful Bidder-
 - a. The claims may be presented either: (a) on quantity of the stores, where the quantity does not correspond to the quantity shown in the packing List/Insufficiency in packing, or (b) on quality of the stores, where quality does not correspond to the quality mentioned in the contract.
 - b. The quantity claims for deficiency of quantity shall be presented within 45 days of completion of JRI and acceptance of goods. The quantity claim shall be submitted to the Seller as per

Form DPM-22 (Available in MoD website and can be given on request).

- c. The quality claims for defects or deficiencies in quality noticed during the JRI shall be presented within 45 days of completion of JRI and acceptance of goods. Quality claims shall be presented for defects or deficiencies in quality noticed during warranty period earliest but not later than 45 days after expiry of the guarantee period. The quality claims shall be submitted to the Seller as per Form DPM-23 (Available in MoD website and can be given on request).
- d. The description and quantity of the stores are to be furnished to the Seller along with concrete reasons for making the claims. Copies of all the justifying documents shall be enclosed to the presented claim. The Seller will settle the claims within 45 days from the date of the receipt of the claim at the Seller's office, subject to acceptance of the claims by the Seller. In case no response is received during this period the claim will be deemed to have been accepted.
- e. The Seller shall collect the defective or rejected goods from the location nominated by the Buyer and deliver the repaired or replaced goods at the same location under Seller's arrangement.
- f. Claims may also be settled by reduction of cost of goods under claim from bonds submitted by the Seller or payment of claim amount by Seller through demand draft drawn on an Indian Bank, in favour of Principal Controller/Controller of Defence Accounts concerned.
- g. The quality claims will be raised solely by the Buyer and without any certification/countersignature by the Seller's representative stationed in India.

14. Warranty-

(a). The following Warranty will form part of the contract placed on successful Bidder-

(i). The Seller warrants that the goods supplied under the contract conform to technical specifications prescribed and shall perform according to the said technical specifications.

(ii). The Seller warrants for a period of **18** months from the date of installation and commissioning, whichever is later, that the goods/stores supplied under the contract and each component used in the manufacture thereof shall be free from all types of defects/failures.

(iii). If within the period of warranty, the goods are reported by the buyer to have failed to perform as per the specifications, the Seller shall either replace or rectify the

same free of charge, within a maximum period of 45 days of notification of such defect received by the Seller, provided that the goods are used and maintained by the Buyer as per instructions contained in the Operation Manual, Warranty of the equipment would be extended by such duration of downtime. Record of the down time would be maintained by the user in the logbook. Spares required for warranty repairs shall be provided free of cost by the Seller. The Seller also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the Buyer and the Seller.

(iv). The Seller also warrants that necessary service and repair back up during the warranty period of the equipment shall be provided by the Seller and he will ensure that the downtime is within 01 % of the warranty period.

(v). The Seller shall associate technical personnel of the Maintenance agency and Quality Assurance Agency of the Buyer during warranty repair and shall also provide the details of complete defects, reasons and remedial actions for defects.

(vi). If a particular equipment/goods fails frequently and/or, the cumulative down time exceeds 10% of the warranty period, the complete equipment shall be replaced free of cost by the Seller within a stipulated period of 03 days of receipt of the notification from the Buyer. Warranty of the replaced equipment would start from the date of acceptance after Joint Receipt Inspection by the Buyer/date of installation and commissioning.

(vii). In case the complete delivery of Engineering Support Package is delayed beyond the period stipulated in this contract, the Seller undertakes that the warranty period for the goods/stores shall be extended to that extent.

15. **Product Support:** The following Product Support clause will form part of the contract placed on successful Bidder-

(a). The Seller agrees to provide product Support for the stores, assemblies/subassemblies, fitment items and consumables,

Special Maintenance Tools (SMT)/Special Test Equipments (STE) subcontracted from other agencies/manufacture by the Seller for a maximum period of 8½ years including 1½ years of warranty period after the delivery/installation of equipment (name of equipment).

(b). The Seller agrees to undertake Maintenance Contract for a maximum period of 07 years, extendable till the complete Engineering Support Package is provided by the Seller.

(c). In the event of any obsolescence during the above mentioned period of product support in respect of any component or sub-system, mutual consultation between the Seller and Buyer will be undertaken to arrive at an acceptable solution including additional cost, if any.

(d). Any improvement/modification/ up gradation being undertaken by the Seller or their sub suppliers on the stores/equipment being purchased under the Contract will be communicated by the Seller to the Buyer and, if required by the Buyer, these will be carried out by the Seller at Buyer's cost.

(e). The Seller agrees to provide an Engineering Support Package as modified after confirmatory Maintenance Evaluation Trials (METs). The SELLER agrees to undertake the repair and maintenance of the equipment, SMTs/STEs test set up, assemblies/sub-assemblies and stores supplied under this contract for a period of 07 years as maintenance contract as specified or provision of complete Engineering Support Package to the Buyer whichever is later, as per terms and conditions mutually agreed between the Seller and the Buyer.

16. **Annual Maintenance Contract (AMC) Clause:** The following AMC clause will form part of the contract placed on successful Bidder-

(a). The Seller would provide comprehensive AMC for a period of 07 years. The AMC services should cover the repair and maintenance of all the equipment and systems purchased under the present Contract. The Buyer Furnished Equipment which is not covered under the purview of the AMC should be separately listed by the Seller. The AMC services would be provided in two distinct ways.

(i). Preventive Maintenance Service: The Seller will provide a minimum of four Preventive Maintenance Service visits during a year to the operating base to carry out

functional check-ups and minor adjustments/tuning as may be required.

(ii). Breakdown maintenance Service: In case of any breakdown of the equipment/system, on receiving a call from the Buyer, the Seller is to provide maintenance service to make the equipment/system serviceable.

(b). Response time: The response time of the Seller should not exceed **06** hours from the time the breakdown intimation is provided by the Buyer.

(c). Serviceability of **90** % per year is to be ensured. This amounts to total maximum downtime of **37** days per year. Also unserviceability should not exceed **03** days at one time. Required spares to attain this serviceability may be stored at site by the Seller at his own cost. Total down time would be calculated at the end of the year. If downtime exceeds permitted downtime, LD would be applicable for the delayed period.

(d). Maximum repair turnaround time for equipment/system would be **03** days. However, the spares should be maintained in a serviceable condition to avoid complete breakdown of the equipment/system.

(e). Technical Documentation: All necessary changes in the documentation (Technical and Operators manual) for changes carried out on hardware and software of the equipment will be provided.

(f). During the AMC period, the Seller shall carry out all necessary servicing/repairs to the equipment/system under AMC at the current location of the equipment/system. Prior permission of the Buyer would be required in case certain components/sub systems are to be shifted out of location. On such occasions, before taking over the goods or components, the Seller will give suitable bank guarantee to the Buyer to cover the estimated current value of item being taken.

(g). The Buyer reserves its right to terminate the maintenance contract at any time without assigning any reason after giving a notice of **03** months. The Seller will not be entitled to claim any compensation against such termination. However, while terminating the contract, if any payment is due to the Seller for maintenance services already performed in terms of the contract, the same would be paid to it as per the contract terms.

Chapter 5

Evaluation Criteria and Commercial Bid Format:

1. Evaluation Criteria:

The broad guidelines for evaluation of Bids will be as follows:

a. Only those Bids will be evaluated which are found to be fulfilling all the eligibility and qualifying requirements of the RFP both technically and commercially.

b. The bidders are required to submit a solution showing how the integration will be done vis-à-vis the qualitative requirement given in Part A of Chapter II of RFP. The technical Bids forwarded by the Bidders will be evaluated by the Buyer with reference to the integrated security solution proposed in response to the qualitative requirements, scope of works and functional requirements as spelt out in chapter-2 of RFP. **The bidders shall clearly mention the make and model of the items quoted in their bid documents. The detailed data sheets for the products/items offered by the bidders are required to be submitted by them to ascertain their compliance with regard to the product specifications mentioned in the RFP. The bidders must attach Authorization Letter from OEMs to support the offered hardware and software for the project in the Performa given at Para 6 of Chapter-4 (Special conditions of RFP).** Price Bids of only those Bidders will be opened whose Technical Bids would clear the technical evaluation.

c. The Bidders are required to spell out the rates of customs duty, Excise duty, VAT, Service Tax, etc in unambiguous terms; otherwise their offers will be loaded with the maximum rates of duties and taxes for the purpose of comparison of prices. If reimbursement of Customs duty/Excise Duty/ VAT is intended as extra, over the quoted prices, the Bidder must specifically say so. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of such duties will be entrained after the opening of tenders. If a Bidder chooses to quote a price inclusive of any duty and does not confirm inclusive of such duty so included is firm and final, he should clearly indicate the rate of such duty and quantum of excise duty included in the price. Failure to do so may result in ignoring of such offers summarily. If a bidder is exempted from payment of customs duty/Excise Duty/VAT duty upto any value of supplies from them, they should clearly state that no excise duty will be charged by them up to the limit of exemption which

they may have. If any concession is available in regard to rate quantum of customs duty/excise duty, VAT, it should be brought out clearly. Stipulations like, excise duty was presently not applicable but the same will be charged if it becomes leviable later on, will not be accepted unless in such cases it is clearly stated by a bidder that excise duty will not be charged by him even if the same becomes applicable later on. In respect of the Bidders who fail to comply with this requirement, their quoted prices shall be loaded with the quantum of purpose of comparing their prices with other Bidders. The same logic applies to customs duty and VAT also.

d. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.

e. The buyer reserves the right to evaluate the offers received by using Discounted Cash Flow (DCF) method at a discounting rate of%. In case cash flow involves more than one currency, the same will be brought to a common denomination in Indian Rupees by adopting exchange rate as BC selling rate of the State Bank of India on the date of the opening of Price Bids.

f. The Lowest Acceptable Bid will be considered further for placement of contract/Supply Order after complete clarification and price negotiations as decided by the Buyer.

g. Any other criteria as applicable to suit a particular case.

Note: The bidders, if required, may be asked for graphical/pictorial demonstration of the proposed installation.

2. Commercial Bid Format:

The bidders shall submit their commercial bid strictly as per the prescribed format. The Lowest Bid will be decided upon the lowest price quoted by the particular Bidder as per the Price Format. The **Total Cost** of all the items including CST/VAT, Installation, Commissioning & Testing and applicable Service Taxes shall be the criteria for deciding the Lowest Bidder.

The Firm will also be asked to offer **Comprehensive Annual Maintenance Contract (CAMC) for next seven years**. Further, they have to provide training to support staff and deploy resident technical support after commissioning of the project. **The L-1 will be decided on**

the basis of the total price offered for equipment including installation charges and rates of CAMC.

2.COMMERCIAL BID
FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF INTEGRATED SECURITY SYSTEM (ISS)

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Sl. No	Description	Qty	Unit Cost	Amount	Unit Price	Amount Installation	Vat/CST	Service Tax	Total
		(a)	(b)	{(a) x (b)}	(d)	{(a) x (d)}	(f)	(g)	(c) + (e) + (f) +(g)
				(c)		(e)			(h)
01.	Supply of IP Based Box Type Camera with necessary fittings	28							
02 (a).	Supply of Outdoor IP based Dome Type Camera	06							
02 (b)	PTZ Camera Control Key board	01							
02 (c)	Network attached storage	01 Lot							
03 (a)	Work Station with 19" LED Screen	02							
03 (b)	Video Management Server	01							
04	42" LED Screen	02							
05.	Video Management Software	01							
06	UTP CAT 6 Cable	4000mtrs							
07	6 core armored OFC cable	2000mtrs							
08	Access Modular Controller	05							
09	Biometric & Smart Card Reader	02							
10	Smart card	300							
11	Smart Card Reader	03							
12	Electro Magnetic Lock	07							
13	Push Button	07							
14	Vehicle tracking System	03							
15(a)	UPS 3KVA	03							
15 (b)	Online UPS 1Phase 1N 1G	02							

15 (c)	Online UPS 3Phase 1N 1G	01							
16	Armoured Power Cable	5000 mtrs							
17	I/O Box	34							
18	8 port poe switch	08							
19	24 port L2 gigabit switch	01							
20	LIU - 12 port	08							
21	Media Convertors Giga Bit	16							
22	Pigtail	96							
23	OFC patch Cord	32							
24	Indoor 6U Rack	08							
25	Boom Barrier (Length up to 4 mtrs)	03							
26	Flap Barrier	01							
27	Road Blocker	01							
28.	Bollard	01							
29	Under Vehicle Scanning System(UVSS)	1							
30	Automated License Plate Reading System(ALPRS)	1							
31.	Explosive Detection System	01							
32	Hand Held Explosive Detector	04							
33.	Full Height Turnstile with canopy	01							
34 (a)	Long Range RF Reader	02							
34(b)	Long Range RFID Card	150							
35 (a)	PC Server for ISS Access Control System	01							
35 (b)	Client workstation for ISS Access Control System	01							
36	Application Software	01							
37	Graphical User Interface	01							
38	ISS Alarm Handling Management System	01							
J	Total price offered for equipment (including installation charges and applicable taxes)								

K	Cost of CAMC for 7 years' period after expiry of warranty period inclusive of all applicable taxes (Cost of CAMC + Applicable Taxes.....) Year wise break-up to be given.								
L	Total Price offered for the project { (J) + (K) }								

Note:

Warranty & Annual Maintenance:

Comprehensive Annual Maintenance Contract (CAMC):

All equipments, software and hardware shall be covered by at least Eighteen **months on-site warranty** from the date of commissioning of the project. The bidding Firms are required to quote the rate of **Comprehensive Annual Maintenance Contract (CAMC) for next Seven years after completion of the warranty period. The L-1 will be decided on the basis of the total price offered at Sl. No. (L) in the table given above and after apply DCF technique as stated in para 1 (e) above.**

