

# **PUNJAB POLICE HOUSING CORPORATION LTD.**

**POLICE COMPLEX, PHASE-VII, SAS NAGAR.  
TEL. NO. 0172-4080111, 4080112 & FAX 0172-4080107**

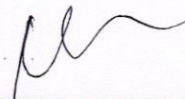
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**No. 06. 2021-22 DATED 06.05.2021**

## **EXPRESSION OF INTEREST**

Punjab Police Housing Corporation invites Expression of Interest for the work of SITC of City Surveillance System in S.A.S. Nagar (Punjab). Preliminary documents showing technical specifications & other terms and conditions can be downloaded from the website [www.pphcl.org](http://www.pphcl.org) w.e.f. 07.05.2021 (5:00 PM).

Pre-bid meeting shall be held online on 17.05.2021 at 11.00AM on PPHC Webex link no. 1767968732. The tender documents finalized during the Pre bid meeting will be uploaded for inviting tenders and no claim/ objection will be entertained after Pre bid meeting.



**CHAIRMAN-CUM-MANAGING DIRECTOR**

**PUNJAB POLICE HOUSING CORPORATION LIMITED  
POLICE COMPLEX, PHASE-VII, SAS NAGAR.**

**BID DOCUMENT**

**NAME OF WORK:** Supply, Installation, Commissioning & Maintenance of “City Surveillance System” in S.A.S. Nagar City

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## **INVITATION OF BIDS**

### **1. NIT INFORMATION:**

Tender Inviting Authority	Punjab Police Housing Corporation (PPHC)
Tender / RFP Reference No.	
Place of availability of Tender Documents (RFP)	Punjab State Tendering Portal: • <a href="https://eproc.punjab.gov.in">https://eproc.punjab.gov.in</a>
Place of submission of Bids	Punjab State Tendering Portal: <a href="https://eproc.punjab.gov.in">https://eproc.punjab.gov.in</a>
Is Offline Submission Allowed (Yes/No)	No
Withdrawal Allowed (Yes/No)	Yes (on/before the last date and time of bid submission)
Date and Time of release of RFP	XX/XX/XXXX at XX:XX hrs
Payment Mode (Online / Offline)	Tender Document fee along with applicable Tender processing fee to be paid Online on <a href="https://eproc.punjab.gov.in">https://eproc.punjab.gov.in</a>
One-time Procurement	Yes
Bid Validity days	90 days
Location (Work / Services / Items / As per RFP)	S.A.S. Nagar
Cost of Tender Document (To be deposited with technical & Commercial bid)	Rs. 5900/- Rupees Five thousand nine hundred only  To be paid online on the eProcurement Portal
Bid Security / Earnest Money Deposit (EMD) (To be deposited with technical & Commercial bid)	Rs. 10,00,000/- (Rupees ten lakh only)  To be paid online on the eProcurement Portal
E-mail Address to send Pre-bid Queries	<a href="mailto:md.pphcl@punjab.gov.in">md.pphcl@punjab.gov.in</a> _____
Method of Selection	Least Cost / Lowest Cost (L1)
Last Date and Time for submission of Pre-Bid queries	17.05.2021 (11.00AM)
Date of Pre-bid Meeting	17.05.2021 (11.00AM)
Place of Pre-bid meeting	Webex link: 1767968732
Start date and time for Submission of Bids	XX/XX/XXXX at XX:XX hrs
Last date and time for Submission of Bids	XX/XX/XXXX at XX:XX hrs
Opening of Eligibility Criteria	XX/XX/XXXX at XX:XX hrs
Opening of Technical Bids	To be informed later
Opening of Commercial Bids	To be informed later
Name and Address of correspondence	Chief Engineer PPHC address

## **1. DISCLAIMER:**

The information contained in this Request for Proposal document (RFP) or subsequently provided to the bidders, whether verbally or in documentary or any other form by or on behalf of the Tenderer or any of their employees, is provided to the Bidders on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP is not an agreement and is neither an offer nor invitation by the Tenderer to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in the formulation of their proposals pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the purchaser in relation to the project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require.

This RFP may not be appropriate for all persons, and it is not possible for the Tenderer, its employees or advisers to consider the objectives, technical expertise and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in this RFP, may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct their own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this RFP and obtain independent advice from appropriate sources.

Information provided in this RFP to the Bidders is on a wide range of matters, some of which depends upon interpretation of law. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Tenderer accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.

The Tenderer, its employees and advisers make no representation or warranty and shall have no liability to any person including any Bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way in this selection process.

The Tenderer also accepts no liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any Bidder upon the statements contained in this RFP. The Authority may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this RFP.

The issue of this RFP does not imply that the Tenderer is bound to select a Sole / Lead Bidder or to appoint the selected Bidder, as the case may be, for the Project and the Tenderer reserves the right to reject all or any of the Proposals without assigning any reasons whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its Proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the Purchaser or any other costs incurred in connection with or relating to its Proposal. All such costs and expenses will remain with the Bidder and the Tenderer shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred

by an Bidder in preparation of submission of the Proposal, regardless of the conduct or Outcome of the Selection Process.

## **2. INTRODUCTION**

Sahibzada Ajit Singh (SAS) Nagar District has been carved out of areas falling in Ropar and Patiala district as 18<sup>th</sup> District of Punjab on 14<sup>th</sup> April 2006. Because of its connectivity with the Union Territory of Chandigarh, the district has been formed to achieve growth of development as this area is emerging as major I.T. hub of Northern India.

The district includes Mohali, Kharar and Dera Bassi Teshils. It is located in the north east part of Punjab and is part of Rupnagar division. The District includes 383 villages. The important township in the district are Kharar, Kurali, Mohali, Zirakpur & Dera Bassi. Kharar block is the largest administrative unit of the district with 138 villages followed by Majri block with 116 villages and Derabassi block with 102 villages. 27 villages were newly added in the District Sahibzada Ajit Singh Nagar, which were carved out from District Patiala.

With ever growing size of Mohali District, ensuring high levels of physical security without significantly increasing the number of security personnel or budget seems to be a daunting task. A heightened sense of security and ever increasing challenges require new tactics with more access to integrated system and centralized information system for planning and decision making purposes.

Hence, on behalf of Mohali Police, Punjab Police Housing Corporation (PPHC) intends to establish City Surveillance System in Mohali city and for the same, PPHC inviting proposals from qualified, experienced and domain expert Firms/System Integrators with relevant experience in the domain of City Surveillance with proactive Video Analytic system, Automatic Number Plate Recognition System (ANPR), Red Light Violence Detection (RLVD) System with e-Challan generation for "Supply, Installation, Commissioning & Maintenance of City Surveillance System in Mohali City, Punjab.

### **a. Project Objective:**

This project has an objective to implement integrated video surveillance system (VMS) which includes Command and Control centre, Video Management Software, traffic monitoring system & e-Challan generation for the Mohali Police Jurisdiction.

This system shall also integrate with surveillance systems of different stakeholders with the objective of enhancing safety and security in the cities. The system shall help-

- To help in investigation of crime
- Monitoring of suspicious people, vehicles, objects etc. with respect to protecting life and property and maintaining law and order in the city
- Help in preventing, detecting and dealing with criminal activities with minimum turnaround time
- To detect Vehicle & Type along with other attributes
- To effectively manage Road Traffic
- Automatic recognition of Number Plates of vehicles (for all types of vehicles including two-wheelers) within apre-defined range and facilitate efficient traffic management
- To search vehicles with a given number plate to track movement of vehicles
- Automatic recognition of hot-listed, license expired, or wanted vehicle to facilitate criminal investigation.
- Automatic alert generation when a crowd is formed in an otherwise normal activity area.
- Smart investigation for post facto analysis of incidents.
- Red Light Violation Detection system using the installed cameras at the traffic intersection and automatic generation of e-challan in prescribed form by the police

department either in English, Hindi and Punjabi (as the case may be). Bidder must ensure the integration of this system with existing “VAHAN & SARTHI” system using SDK/API provided by the department

- Support police to maintain Law and Order
- To provide assistance to citizen at the time of emergency
- Provide alerts and video analytics for counter terrorism
- Continuous monitoring of some important locations/ public places in city area like area near to railway station, airport and other public places for keeping eye on regular activities & for emergency support

The Proposed video surveillance system will enable the above by using VMS and Video analytics. This system will provide

- Alerts/ feedback to the Police Department about abnormal movements/ suspicious objects etc.
- Better Management of Security breaches based on alerts received from system
- Improved turnaround time in responding to any investigation case, faster access to evidence in case of security breach, law violation in the prescribed areas.

**b. Purpose of the system:**

- a) To use for surveillance of selected intersections and locations, which will be identified by the officials of the concerned Police Jurisdiction.
- b) To detect an event and identification of a person's face, object features within a predefined range.
- c) To automatically recognize vehicles Number Plates (for all types of vehicles including two-wheelers) within a pre-defined range and facilitate efficient traffic management.
- d) To search vehicles with a given number plate to track movement of vehicles.
- e) To automatically recognize hot-listed, license expired, or wanted vehicle to facilitate criminal investigation;
- f) To have provision for automatic alert generation when a crowd is formed in an otherwise normal activity area.
- g) To carry out Smart investigation for post facto analysis of incidents.
- h) To integrate and data exchange with other cities as and when needed.
- i) To automatic generation of e-challan in prescribed form by the concerned police department either in English, Hindi and Punjabi (as the case may be) with the help of Red Light Violation Detection system (RLVD) at the traffic intersection.
- j) To provide an integrated solution that ANPR and RLVD should work in synchronize mode to detect the Vehicle for Red Light Violation in traffic signal.

### **3. INSTRUCTIONS TO SOLE / LEAD BIDDERS**

#### **a. Definitions:**

Unless otherwise clearly required by the context, the following terms as used in this document/RFP shall have the respective meanings as defined below:

1. **"Acceptance Test Document"** means a mutually agreed document, which defines procedures for testing the Scope of work and BOM of the project against requirements laid down in the RFP
2. **"Agreement"** means the Agreement to be signed between the successful L1 Sole / Lead Bidder/SI and PPHC, including all attachments, appendices, all documents incorporated by reference thereto together with any subsequent modifications, the RFP, the bid offer, the acceptance and all related correspondences, clarifications, presentations.
3. **"AMC" means** Annual Maintenance Contract of the project after expiry of Three Years warranty period of the project.
4. **"Authorized Representative"** shall mean any person authorized by either of the parties.
5. **Bid Amount:** The cost of the RFP
6. **"Sole / Lead Bidder"** means any firm offering the solution(s), service(s) and /or materials required in the RFP. The word Sole / Lead Bidder when used in the pre award period shall be synonymous with Sole / Lead Bidder or operator or service provider, and when used after award of the Contract shall mean the successful Sole / Lead Bidder or system integrator with whom PPHC signs the agreement for rendering of services including FMS for Mohali City Surveillance.
7. **"CCC"** means Command and Control Centre which will host all the core layer equipment and services of City surveillance project.
8. **"Contract"** is used synonymously with Agreement.
9. **"Corrupt Practice"** means the offering, giving, receiving or soliciting of anything of value or influence the action of an official in the process of Contract execution.
10. **"Default Notice"** shall mean the written notice of Default of the Agreement issued by one Party to the other in terms hereof.
11. **EMD:** Earnest Money Deposit
12. **"Final Acceptance Test (FAT)"** means the acceptance testing of Hardware/Software/Services deployed by Implementing Agency/ System Integrator for City Surveillance Mohali
13. **"Fraudulent Practice"** means a misrepresentation of facts in order to influence a procurement process or the execution of a Contract and includes collusive practice among Sole / Lead Bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the PPHC of the benefits of free and open competition.
14. **"FMS"** means Facility Management Services at specified locations as per the RFP requirements.
15. **"GoP"** shall stand for the Government of Punjab.
16. **"Implementation Agency or System Integrator"** means successful Sole / Lead Bidder.
17. **"Implementation Period"** shall mean the period from the date of signing of the Agreement and up to the issuance of Final Acceptance Certificate of the Project.
18. **PPHC:** Punjab Police Housing Corporation
19. **"Law"** shall mean any Act, notification, bylaw, rules and regulations, directive, ordinance, order or instruction having the force of law enacted or issued by the Central Government and/ or the Government of Punjab or any other Government or regulatory authority or



- political subdivision of government agency.
20. "LOI" means issuing of "Letter of Intent" which shall constitute the intention of the Tenderer to place the Purchase Order with the successful Sole / Lead Bidder.
  21. "Party" means PPHC or Sole / Lead Bidder, individually and "Parties" mean PPHC and Sole / Lead Bidder, collectively.
  22. "Period of Agreement" means three (3) year from the date of Final-Acceptance of City Surveillance Project, extendable for further 2 years.
  23. "Proposal" means the Technical Proposal and the Financial Proposal.
  24. "Request for Proposal (RFP)", means the detailed notification seeking a set of solution(s), services(s), materials and/or any combination of them.
  25. "Requirements" shall mean and include schedules, details, description, statement of technical data, performance characteristics, standards (Indian as well as International) as applicable and specified in the RFP.
  26. "Service" means provision of Contracted service viz., Supply, Installation, Commissioning, maintenance and associated services for the Tender document as per this RFP.
  27. "Site" shall mean the location(s) for which the Contract has been issued and where the service shall be provided as per agreement.
  28. SLA: Service Level agreement between PPHC and the Selected L1 Sole / Lead Bidder of the Project (Implementing Agency/Service Provider).
  29. "Stakeholders" means Mohali Traffic Police, PPHC and Implementing Agency
  30. "Termination Notice" means the written notice of termination of the Agreement issued by one Party to the other in terms hereof.
  31. "Third Party **Agency**" means any agency other than the successful Sole / Lead Bidder, appointed by PPHC for monitoring the city surveillance project during commissioning and operation.
  32. "Uptime" means the time period when specified services/network segments with specified technical and service standards as mentioned in this RFP are available to PPHC. The uptime will be calculated as follows: Total time in a quarter (in minutes) less total Service Down time (in minutes) in the quarter.
  33. "%Uptime" means ratio of 'up time' (in minutes) in a quarter to Total time in the quarter (in minutes) multiplied by 100.
  34. "Service Down Time" (SDT) means the time period when specified services/network segments with specified technical and operational requirements as mentioned in this document are not available to PPHC. The network shall be operational on all days of a year and 24-hours/ day with in the uptime specified in the Service Level Agreement (SLA). The PPHC is considered as operational when all facilities at Command & Control Centre and field locations are working, providing all/ specified services as mentioned in full capacity.
  35. "VCA" means Video Content Analytics.
  36. "**VMS**" means Video Management System.

#### **4. Local Conditions**

- a) Each Sole / Lead Bidder is expected to fully get acquainted with the local conditions and factors, which would have any effect on the performance of the contract and /or the cost.
- b) The Sole / Lead Bidder is expected to know all conditions and factors, which may have any effect on the execution of the contract after issue of Letter of Award as described in the bidding documents. The tenderer shall not entertain any request for clarification from the Sole / Lead Bidder regarding such local conditions.
- c) It is the Sole / Lead Bidder's responsibility that such factors have properly been investigated and considered while submitting the bid proposals and no claim whatsoever including those for financial adjustment to the contract awarded under the bidding documents will be entertained by the Tenderer. Neither any change in the time schedule of the contract nor any financial adjustments arising thereof shall be permitted by the Tenderer on account of failure of the Sole / Lead Bidder to know the local news / conditions.
- d) The Sole / Lead Bidder is expected to visit and examine the location of offices & field sites and its surroundings and obtain all information that may be necessary for preparing the bid at their own interest and cost.

# SECTION 1

## INSTRUCTIONS TO BIDDERS (ITB)

### A. General

#### 1. Scope of Bid

**1.1** The Managing Director, PPHC, Sahibzada Ajit Singh Nagar (referred to as Employer in these documents) invites bids for the construction of works (as defined in these documents and referred to as "the works") detailed in the table given in IFB. The bidders may submit bids for the works detailed in the table given in IFB.

**1.2** The successful bidder will be expected to complete the works by the intended completion date specified in the Contract data.

#### 2. Source of Funds

**2.1** The Department shall not be responsible for non-release or delayed release of funds by the Department of Finance/Funding Agency.

#### 3. Eligibility and other Important Instruction

**3.1** Please refer Section 10 (Summary of the work)

#### 4 The Bidder shall submit the bid in two parts as under:-

##### Part – 1:- TECHNICAL BID

	The bidder has to submit online readable scanned copies of the following documents in document folder on web site
i)	Copy of enlistment.
ii)	EPF, ESI account number, PAN No and GST scanned copies.
iii)	Staff list
iv)	List of equipment/machinery to be deployed on the work.
V)	An affidavit showing that the bidder had not been debarred/blacklisted by any Govt./Semi-Govt. Organization or any Corporation at any stage.
vi)	An undertaking that he will be able to invest minimum cash up to 25% of contract value of work, during implementation of work.
vii)	Experience in similar works
viii)	Financial Turnover in similar activities.
ix)	Balance sheet, Profit and loss A/C.
X)	Any other document required as per the ITB.

## **Part-II : PRICE BID**

1. The Tenderer shall duly fill up the item rate in the BOQ on the website while submitting the bid on a specified format.

### **4. Qualification of the Bidder**

4.1 Please refer Section-10 (Summary of Work)

#### **4.2 in addition, each bidder shall submit the following information for his qualification**

- a) Copy of Permanent Account Number (PAN) issued by Income Tax Department;
- b) Affidavit/undertaking of not having been black-listed by any Govt. /Semi Govt. Organization/Corporation at any stage and/or debarred by PPHC or any other Regional Development Authority.
- c) Affidavit/undertaking that information being submitted is correct and true, and that any false information shall lead to disqualification at any stage;
- d) GST Registration Number (GST) issued by concerned department;
- e) EPF registration certificate from Provident Commissioner;
- f) Details of his available bid capacity with an undertaking that his available bid capacity, calculated as per clause 4.4 below, is more than the total value of his financial bid;
- g) Any other qualification information specified in the Conditions of Particular Application
- h) ESI registration certificate.

#### **4.3 To qualify for award of the contract, each bidder in its name should have** fulfil the requirements given in Summary of work (Section—10)

#### **4.4** Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.; and/or
- participated in the previous bidding for the same work and had quoted unreasonably high bid prices and could not furnish rational justification to the employer.

### **5. One Bid per Bidder**

- 5.1 Each bidder shall submit only one bid for one work/package. A bidder who submits more than one Bid will cause all the proposals with the Bidder's participation to be disqualified.

### **6. Cost of Bidding & sufficiency of Bidding**

- 6.1 The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.

6.2 The bidder shall be deemed to have satisfied himself before bidding as to the correctness and sufficiency of his bid information for the works and of the rates and prices given in the relevant Schedule or quoted by him, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion of the works.

### **7. Site visit**

The bidder at the his own responsibility, expenses and risk, is encouraged to visit and examine

the Site(s) of Project/Work(s) and its/their surroundings and obtain all information (including that on the risks, contingencies and other circumstances which may affect or influence the bid) that may be necessary for preparing the Bid and entering into a contract. No extra charges consequent on any misunderstanding or otherwise shall be allowed. The bidder may reassure himself at his own cost about the soil properties at the site. The Employer shall not be responsible for any variation in soil strata from that given in this document.

## **Bidding Documents**

### **8. Content of Bidding Documents**

**8.1** The set of the bidding documents comprises the documents listed below and addendum/corrigendum issued in accordance with Clause 10.

<b>Section</b>	<b>Particulars</b>
----------------	--------------------

- |     |  |
|-----|--|
| 0.  | Invitation for Bids  |
| 1.  | Instructions to Bidders  |
| 2.  | Qualification Information and other forms                              |
| 3.  | General Conditions of Contract & Conditions of Particular Application  |
| 4.  | Contract Data  |
| 5.  | Additional Conditions  |
| 6.  | Rules for Sanitary Arrangements of Workers                             |
| 7.  | Contractors' Labour Regulations  |
| 8.  | Form of Bid  |
| 9.  | Bill of Quantities (BOQ)/Schedules of Payment (S-I) & Variation (S-II) |
| 10. | Securities and other forms   |
| 11. | Drawings, Site Investigation Data & Other Technical Plans              |
| 12. | Documents to be furnished by Bidder                                    |

### **9. Clarification of Bidding Documents**

**9.1** A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or by cable (hereinafter "cable" includes telex and facsimile) at the Employer's address indicated in the invitation to bid. The Employer will respond to any request for clarification which he received earlier than 07 days prior to the deadline for submission of bids. Copies of the Employer's response will be forwarded to all purchasers of the bidding documents, including a description of the enquiry but without identifying its source. (Deviation in specifications will not be entertained after Pre-bid meeting)

### **10. Amendment of Bidding Documents**

**10.1** Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.

**10.2** Any addendum thus issued shall be part of the bidding documents and shall be communicated in writing or by cable to all the purchasers of the bidding documents and shall be put on web site also. Prospective bidders shall acknowledge receipt of each addendum by cable to the Employer.

**10.3** To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may extend as necessary the deadline for submission of bids, in accordance with Sub-Clause 20.2 below.

**11.0** ---

**11.1** ---

### **12. Documents comprising the Bid**

**12.1** The bid to be submitted on-line by the bidder as Section 12 of the Bid document (refer Clause 8.1) shall comprise scanned copies of the following in two separate parts:

#### **Part I : Technical Bid –**

- (i) Qualification Information and supporting documents as specified in Clause 4.2.
- (ii) Certificates, undertakings, affidavit/undertakings as specified in Clause 4.2.
- (iii) Any other information pursuant to Clause 4.2 of these instructions.
- (iv) Undertaking that the bid shall remain valid for the period specified in Clause 15.1.
- (v) General Arrangement Drawings, type of material and brief specification ensuring conformity to technical requirements.

## **Part II : Financial Bid**

Financial Bid" shall comprise item wise rates written both in figures and words in the prescribed Form of Bid as specified in Section 8.

### **13. Bid Prices**

**13.1** The contract shall be for the whole works as described in sub clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.

**13.2** The bidders shall make online entries to fill in rates, prices and line item total (both in figures and words) for all items of work described in the Bill of Quantities alongwith total bid price (both in figures and words). The items for which no rate or price is entered by the Bidder shall be paid as per rates approved by the employer.

**13.3** All duties, taxes, and other levies payable by the contractor under the contract, or for any other cause shall be included in the rates, prices and total Bid Price shall be submitted by the Bidder.

**13.4** The rates and prices quoted by the bidder shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account.

### **14. Currencies of Bid and Payment**

**14.1** The unit rates and the prices shown in BOQ shall be Indian Rupees.

### **15. Bid Validity**

**15.1** Bids shall remain valid for a period not less than ninety (90) days after the deadline date for bid submission specified in Clause 20.

**15.2** In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid but will be required to extend the validity of his bid security for a period of the extension, and in compliance with Clause 16 in all respects.

### **16. Bid Security/Earnest Money Deposit.**

#### **16.1**

- a) The **Tender Form Fee & EMD** should be deposited Online only.
- b) The **Tender Form Fee & EMD** in any shape other than that described above shall not be accepted.

**16.3** Any bid not accompanied by an acceptable Bid Security and not secured as indicated in Sub-Clauses 16.1 above shall be rejected by the Employer as non-responsive.

**16.4** The Bid Security of unsuccessful bidders/bidder who has withdrawn his bid before opening of

bid as per clause 22.3 will be returned within 28 days of the end of the bid validity period specified in Sub-Clause 15.1.

**16.5** The Bid Security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required Performance Security.

**16.6** The Bid Security may be forfeited

- (a) if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
- (b) If the Bidder does not accept the correction of the Bid Price, pursuant to Clause 27; or
- (c) In the case of a successful Bidder, if the Bidder fails within the specified time limit to
  - (i) Sign the Agreement; or
  - (ii) Furnish the required Performance Security.

**17. Alternative Proposals by Bidders**

**17.1** Bidders shall submit offers that comply with the requirements of the bidding documents, including the basic technical design as indicated in the drawing and specifications. Alternatives will not be considered.

**18. Format and Signing of Bid as per ITB**

**a) Submission of Bids**

**19. Sealing and Marking of Bids as per ITB**

The Bidder shall place two separate digitally signed files marked “Technical Bid (Envelope-I)” and “Financial Bid (Envelope-II)” The contents of Technical and Financial Bids will be as specified in Clause 12.1. All documents are to be signed digitally by the bidders.

**20. Deadline for Submission of the Bids**

**20.1** Complete Bids (including Technical and Financial) shall be received by Engineer online not later than the date and time indicated in the BDS. In the event of the specified date for the submission of bids declared a holiday for the Engineer, the Bids will be received upto the appointed time on the next working day.

**20.2** The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 10, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

**21. Possession of the Site**

**21.1** The agency will tie up with the local government/ Municipal Corporation for any clearance required to execute the work .

**22. Modification and Withdrawal of Bids**

**22.1** Bidders may modify or withdraw their bids by giving notice in writing before the deadline prescribed in Clause 20.

**22.2** No bid shall be modified after the deadline for submission of Bids.

**22.3** Withdrawal or modification of a Bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in Clause 15.1 above or as extended pursuant to Clause 15.2 shall result in the forfeiture of the Bid security /EMD pursuant to



Clause 16.

- 22.4** Bidders may only offer discounts to, or otherwise modify the prices of their Bids by submitting Bid modifications in accordance with this clause, or included in the original Bid submission.

### **E. Bid Opening and Evaluation**

#### **23. Bid Opening**

**23.1** The Engineer shall open the bids online and the same shall be evaluated by Tender Processing Committee (TPC)/Engineer as specified in the BDS. The bids shall be opened in the presence of the Bidders or their representatives who choose to attend at time, date and the place specified in the BDS in the manner specified in Clause 20 and 23.3. In the event of the specified date of Bid opening being declared a holiday for the Engineer, the Bids will be opened at the appointed time and location on the next working day.

**23.2** The Part-I containing Technical Bid shall be opened first.

**23.3** i) The bids will be taken up for evaluation with respect to the Qualification Information and other information furnished in Part-I of the bid pursuant to Clause 12.1.

ii) The bidder will be asked (usually within 10 days of opening of the Technical Bid) to clarify or modify his technical bid, if necessary with respect to any rectifiable defects.

iii) The bidders will respond in not more than 7 days of issue of the clarification letter, which will also indicate the date, time and venue of opening of the Financial Bid.

iv) On receipt of these clarifications, the Tender Processing Committee/Engineer will finalize the list of responsive bidders whose financial bids are eligible for consideration.

v) Evaluation of the technical bids with respect to qualification information and other information furnished in Part-I of the bid in pursuant to Clause 12.1 of ITB, shall be taken up and completed within 21 (Twenty One) working days of the date of bid opening, and a list will be drawn up of the responsive bids whose financial bids are eligible for consideration.

vi) The Employer shall inform, by Post, fax or e-mail, the bidders, whose technical bids are found responsive, date, time and place of online opening of Part-II i.e. Financial Bid as stated in the BDS. In the event of the specified date being declared a holiday for the Employer, the bids will be opened at the appointed time and location on the next working day. The Bidders or their representative may attend the opening of financial bids.

**23.4** At the time of opening of "Financial Bid", the names of the bidders who were found responsive in accordance with Clause 23.3 (iv) will be announced. The bids of only these bidders will be opened. The responsive Bidders' names, the Bid prices, the total amount of each bid, any discounts, and such other details as the Engineer may consider appropriate, will be announced by the Engineer at the time of opening. Any Bid price or discount, which is not read out and recorded, will not be taken into account in Bid Evaluation.

**23.5** The Engineer shall prepare minutes of the opening of the Financial Bid, including the information disclosed to those present in accordance with Sub-clause 23.4.

#### **24. Process to Be Confidential**

**24.1** Information relating to the examination, clarification, evaluation, and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other

persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Employer's processing of Bids or award decisions may result in the rejection of his Bid.

## **25. Clarification of Bids**

- 25.1** To assist in the examination, evaluation, and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of the unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with Clause 27.
- 25.2** Subject to sub-clause 25.1, no Bidder shall contact the Employer on any matter relating to its bid from the time of the bid opening to the time the contract is awarded.
- 25.3** Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidders' bid.

## **26. Examination of Bids and Determination of Responsiveness**

**26.1** During the detailed evaluation of Qualification Information/"Technical Bids", the Engineer will determine whether each Bid (a) meets the eligibility criteria defined in Clause 3 and 4 ; (b) documents has been properly signed; (c) is accompanied by the required securities and; (d) is substantially and unconditionally responsive to all the requirements of the Bidding documents. During the detailed evaluation of the "Financial Bid" the responsiveness of the bids will be further determined with respect to the remaining bid conditions.

**26.2** A substantially responsive "Financial Bid" is one which conforms to all the terms, conditions and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one:

- (a) which affects in any substantial way the scope, quality, or performance of the Works;
- (b) which limits in any substantial way, inconsistent with the Bidding documents, the Engineer's right or the Bidder's obligations under the Contract; or
- (c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

**26.3** If a "Financial Bid" is not substantially responsive, it will be rejected by the Engineer, and may not subsequently be made responsive by correction or withdrawal of the non- conforming deviation or reservation

## **27. Correction of Errors**

- 27.1** Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as per approval of estimate however the rebate quoted by bidder will also be applicable on this corrected rate.
- 27.2** The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount the Bid will be rejected, and the Bid security shall be forfeited in accordance with Sub-Clause 16.6 (b).

## **28. Evaluation and Comparison of Bids**

- 28.1** The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause 26.
- 28.2** In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
- (a) Making any correction for errors pursuant to Clause 27; or
  - (b) Making an appropriate adjustments for any other acceptable variations, deviations;
- 28.3** The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the Bidding documents or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Bid evaluation.
- 28.4** The estimated effect of the price adjustment conditions under Clause 47 of the Conditions of Contract, during the period of implementation of the Contract, will not be taken into account in Bid evaluation.

## **F. Award of Contract**

### **29. Award Criteria**

- 29.1** Subject to Clause 32, the Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the Bidding documents and who has offered the lowest evaluated Bid Price, provided that such Bidder has been determined to be
- (a) Eligible in accordance with the provisions of Clause 3, and
  - (b) Qualified in accordance with the provisions of Clause 4.
- 29.2** If, pursuant to this, contract is being let on a "slice and package" basis, the lowest evaluated Bid Price will be determined when evaluating this contract in conjunction with other contracts to be awarded concurrently, taking into account any discounts offered by the bidders for the award of more than one contract.

### **30. Employer's Right to accept any Bid and to reject any or all Bids**

- 30.1** Notwithstanding Clause 31, the Employer reserves the right to accept or reject any Bid, and to cancel the Bidding process and reject all Bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Employer's action.

### **31. Notification of Award and Signing of Agreement**

- 31.1** The Bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the Conditions of Contract called the "Letter of Acceptance") will state the sum that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").
- 31.2** The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause 31.
- 31.3** The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and sent to the successful Bidder, or kept ready for signature of

the successful bidder in the office of employer (**choose one alternative**) within 15 days following the notification of award along with the Letter of Acceptance. Within 15 days of receipt, the successful Bidder will sign the Agreement and deliver it to the Employer.

- 31.4** Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

**32. Performance Security:**

- 32.1** Within 15 days of receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a Performance Security @10% of the contract amount, in any of the forms given below:

- a bank guarantee in the form or
- Bank draft/Fixed Deposit Receipt in favour of Managing Director, PPHC, SAS Nagar

- 32.2** If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued either (a) at the Bidder's option, by a Nationalized/Scheduled Indian bank or (b) by a foreign bank located in India and acceptable to the Employer.

- 32.3** Failure of the successful bidder to comply with the requirements of sub-clause 32.1 shall constitute a breach of contract, cause for annulment of the award, forfeiture of the bid security.

**33 Advance Payment and Security**

- 33.1** The Employer will provide an Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to maximum amount, as stated in the Contract Data.

**34. Corrupt or Fraudulent Practices**

- 34.1** The employer will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question and will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract with PPHC and any other agencies, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for the contract, or in execution.

For the purpose of this clause, "Corrupt Practice" means the offering, giving, receiving or soliciting of anything of value to influence the execution. "Fraudulent Practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition".

# **SECTION 2:**

## **FORMS OF BID, QUALIFICATION INFORMATION AND LETTER OF ACCEPTANCE**

### **Table of Forms:**

- **CONTRACTOR'S BID**
- **QUALIFICATION INFORMATION**
- **LETTER OF ACCEPTANCE**
- **NOTICE TO PROCEED WITH THE WORK**
- **AGREEMENT FORM**

**Contractor's Bid**

**DESCRIPTION OF THE WORKS:** \_\_\_\_\_

\_\_\_\_\_

To : Managing Director, PPHC, Sahibzada Ajit Singh Nagar

Address : Punjab Police Housing Corporation, Police Complex, Phase-VII, SAS Nagar,  
Sahibzada Ajit Singh Nagar

GENTLEMEN,

Having examined the bidding documents including addendum, we offer to execute the Works described above in accordance with the Conditions of Contract, Specifications, Drawings and Bill of Quantities accompanying this Bid and as per price bid.

This Bid and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below :

1. To be filled in by the Bidder, together with his particulars and date of submission at the bottom of the Form of Bid.

We hereby confirm that this Bid complies with the Bid Validity and Bid Security required by the Bidding documents.

We attach herewith our current income-tax clearance certificate.

Yours faithfully,

Authorized Signature:

Name & Title of Signatory: \_\_\_\_\_

Name of Bidder : \_\_\_\_\_

Address : \_\_\_\_\_

## **QUALIFICATION INFORMATION**

The information to be filled in by the Bidder in the following pages will be used for purposes of qualification as provided for in Clause 4 of the Instructions to Bidders. This information will not be incorporated in the Contract.

### **1. For Individual Bidders**

#### **1.1 Constitution or legal status of Bidder [Attach copy]**

Place of registration: \_\_\_\_\_

Principal place of business: \_\_\_\_\_

Power of attorney of signatory of Bid  
[Attach] \_\_\_\_\_

#### **1.2 Total value of work done in the last five years\*\* Rs. In Lacs.**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### **1.3.1 Work performed as prime contractor (in the same name) on works of a similar nature over the last five years.**

<u>Project Name</u>	<u>Name of the Employer *</u>	<u>Description of work</u>	<u>Contract No.</u>	<u>Value of contract (Rs. lacs)</u>	<u>Date of issue of work order</u>	<u>Stipulated period of completion</u>	<u>Actual date of completion *</u>	<u>Remarks explaining reasons for delay and work completed</u>
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\_\_\_\_\_  
\_\_\_\_\_

#### **1.3.2 Quantities of work executed as prime contractor (in the same name and style) in the last five years: i.e.**

<u>Year</u>	<u>Name of the Work</u>	<u>Name of the Employer *</u>	<u>Quantity of work performed (cum) @</u> <u>Cement concrete (including RCC&amp;PCC)</u>	<u>Masonry</u>	<u>E/works</u>	<u>Remarks *</u> <u>(indicate contract Ref)</u>
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**1** Attach certificate(s) from the Engineer(s)-in-Charge

**2** Attach certificate from Chartered Accountant.

1.4 Information on works for which bids have been submitted and works which are yet to be completed as on the date of this bid.

(A) Existing commitments and on-going works:

(B) Works for which bids already submitted:

Description of Work (1)	Place & State (2)	Name and Address of Employer (3)	Estimated value of works (Rs. lacs) (4)	Stipulated period of completion (5)	Date when decision is expected (6)	Remarks if any (7)
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1.5

<b><u>Position</u></b>	<b><u>Name</u></b>	<b><u>Qualifications</u></b>	<b><u>Years of experience (general)</u></b>	<b><u>Years of experience in the proposed position</u></b>
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Project Manager	*	*	*	*
*	*	*	*	*
*	*	*	*	*
*	*	*	*	*
etc.				

1.7 Proposed subcontracts and firms involved.

<b>Sections of the works</b>	<b>Value of Sub-contract</b>	<b>Sub-contractor (name and address)</b>	<b>Experience in similar</b>
*	*	*	*
	*	*	
*	*	*	*
	*	*	
*	*	*	

1.8 Financial reports for the last three years: balance sheets, profit and loss statements, auditors' reports (in case of companies/corporation), etc. List them below and attach copies.

1.9 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List them below and attach copies of support documents [sample format attached].

1.10. Name, address, and telephone, telex, and email of the Bidders' bankers who may provide references if contacted by the Employer.



1.11 Information on litigation history in which the Bidder is involved.

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<u>Other party(ies)</u>	<u>Employer</u>	<u>Cause of dispute</u>	<u>Amount involved</u>	<u>Remarks showing present status</u>
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1.12 Statement of compliance under the requirements of Sub Clause 3.2 of the instructions to Bidders.

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1.13 Proposed work method and schedule. The Bidder should attach descriptions, drawings and charts as necessary to comply with the requirements of the Bidding documents. [Refer ITB Clause 4.1 and 4.3 (k)].

2. Joint Ventures -

3. Additional Requirements

3.1 Bidders should provide any additional information required to fulfill the requirements of Clause 4 of the Instructions to the Bidders, if applicable.

**Letter of Acceptance**  
**(letterhead paper of the Employer)**

\_\_\_\_\_ [date]

To:

\_\_\_\_\_ [name and address of the Contractor]

Dear Sirs,

This is to notify you that your Bid dated \_\_\_\_\_ for execution of the \_\_\_\_\_ [name of the contract and identification number, as given in the Instructions to Bidders] as corrected in accordance with the Instructions to Bidders is hereby accepted .

We note that as per bid, you do not intend to subcontract any component of work.

You are hereby requested to furnish Performance Security, in the form detailed in Para 32.1 of ITB for an amount of Rs. ———— within 15 days of the receipt of this letter of acceptance valid upto 28 days from the date of expiry of Defects Liability Period i.e. upto ..... and sign the contract, failing which action as stated in Para 32.3 of ITB will be taken.

Yours faithfully,

Executive Engineer(E),  
Punjab Police Housing Corporation,  
Sahibzada Ajit Singh Nagar

**Issue of Notice to proceed with the work**  
**(letterhead of the Employer)**

————— (date)

To

————— (name and address of the Contractor)

—————

—————

Dear Sirs:

Pursuant to your furnishing the requisite security as stipulated in ITB clause 32.1 and signing of the contract agreement for the construction of ————— you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully,

**Executive Engineer(E)**  
**PPHC, S.S. Nagar**

## **Agreement Form**

### **Agreement**

This agreement, made the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, between Executive Engineer (Elect), PPHC, S.A.S. Nagar on behalf of MD, PPHC, Sahibzada Ajit Singh Nagar [name and address of Employer]

(hereinafter called “the Employer”) of the one part and \_\_\_\_\_ name and address of contractor] (hereinafter called “the Contractor” ) of the other part.

Whereas the Employer is desirous that the Contractor execute \_\_\_\_\_ [ name and identification number of Contract] (hereinafter called “the Works”) and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein, at a contract price of Rs.....

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
  - i) Letter of Acceptance;
  - ii) Notice to proceed with the works;
  - iii) Contractor’s Bid;
  - iv) Contract Data;
  - v) Conditions of contract (including Special Conditions of Contract);
  - vi) Specifications;
  - vii) Drawings;
  - viii) Bill of Quantities; and
  - ix) Any other document listed in the Contract Data as forming part of the contract.

In witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The Common Seal of \_\_\_\_\_

was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

in the presence of:

Binding Signature of Employer \_\_\_\_\_

Binding Signature of Contractor \_\_\_\_\_

## **SECTION 3: CONDITIONS OF CONTRACT**

## **Conditions of Contract**

### **A. General**

#### **1. Definitions**

- 1.1** Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

**Bill of Quantities** means the priced and completed **Bill of Quantities** forming part of the Bid.

**Compensation Events** are those defined in Clause 42 hereunder.

The **Completion Date** is the date of completion of the Works as certified by the Engineer in charge in accordance with Sub Clause 51.1.

The **Contract** is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.3 below.

The **Contract Data** defines the documents and other information which comprise the Contract.

The **Contractor** is a person or corporate body whose Bid to carry out the Works has been accepted by the Employer.

The **Contractor's Bid** is the completed Bidding document submitted by the Contractor to the Employer and includes technical and financial bid.

The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

**Days** are calendar days; **months** are calendar months.

A **Defect** is any part of the Works not completed in accordance with the Contract.

The **Defects Liability Period** is the period named in the Contract Data and calculated from the Completion Date.

The **Employer** is the party who will employ the Contractor to carry out the Works.

**Engineer-in-Charge:-** The Executive Engineer (Elect) / Assistant Executive Engineer (Elect) will be the Engineer-in-Charge.

**Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer-in-charge by issuing an extension of time.

**Materials** are all supplies, including consumables, used by the contractor for

incorporation in the Works.

**Plant** is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.

The **Site** is the area defined as such in the Contract Data.

**Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer-in-charge.

The **Start Date** is given in the Contract Data. It is the date when the Contractor is asked to commence execution of the works. It does not necessarily coincide with any of the Site Possession Dates.

A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

**Temporary Works** are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

A **Variation** is an instruction given by the Engineer which varies the Works.

**Tender Processing Committee** [TPC] is the committee constituted by the Employer for receiving, opening, processing and evaluating the bids.

The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Contract Data.

## 2. Interpretation

- 2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about the Conditions of Contract.
- 2.2 If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion date for the whole of the Works).
- 2.3 The documents forming the Contract shall be interpreted in the following order of priority:
  - (1) Agreement
  - (2) Letter of Acceptance, notice to proceed with the works
  - (3) Contractor's Bid
  - (4) Contract Data
  - (5) Conditions of Contract including Special Conditions of Contract
  - (6) Specifications
  - (7) Drawings



(8) **Bill of Quantities** and

(9) any other document listed in the Contract Data as forming part of the Contract.

### **3. Language and Law**

**3.1** The language of the Contract and the law governing the Contract are stated in the Contract Data.

### **4. Engineer's Decisions**

**4.1** Except where otherwise specifically stated, the Engineer shall decide contractual matters between the Employer and the Contractor in the role representing the Employer. Any clarifications on the Contract Data shall be given by the Engineer.

### **5. Delegation**

**5.1** The Engineer-in-charge may delegate any of his duties and responsibilities to other people and may cancel any delegation after getting permission from the employer.

### **6. Communications**

**6.1** Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered under Registered post or Speed post or Facsimile (fax) or other electronic means. The notice sent by Registered post or Speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service. The notice sent by Facsimile (fax) or other electronic means shall be effective on confirmation of the transmission

### **7. Subcontracting**

**7.1** The Contractor may sub-contract any portion of work, upto a maximum limit of 25% of contract value or as specified in Contract Data whichever is less, with the approval of the Engineer but shall not assign the Contract without the approval of the Engineer in writing. Sub-contracting does not alter the Contract's obligations and responsibilities under the contract.

### **8. Other Contractors**

**8.1** The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors. The Contractor shall as referred to in the Contract Data, also provide facilities and services for them as described in the Schedule. The employer may modify the schedule of other contractors and shall notify the contractor of any such modification.

### **9. Personnel**

**9.1** The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.

**9.2** If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or his work force stating the reasons the Contractor shall ensure that the

person leaves the Site within seven days and has no further connection with the work in the Contract.

## **10. Employer's and Contractor's Risks**

- 10.1** The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

## **11. Employer's Risks**

- 11.1** The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in the Employer's country, the risks of war, hostilities, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot commotion or disorder (unless restricted to the Contractor's employees), and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor's design.

## **12. Contractor's Risks**

- 12.1** All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

## **13. Insurance**

- 13.1** The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:
- (a) loss of or damage to the Works, Plant and Materials;
  - (b) loss of or damage to Equipment;
  - (c) loss of or damage of property (except the Works, Plant, Materials and Equipment) in connection with the Contract; and
  - (d) personal injury or death.
- 13.2** Policies and certificates for insurance shall be delivered by the Contractor to the Engineer-in-charge for the approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.
- 13.3** If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- 13.4** Alterations to the terms of an insurance shall not be made without the approval of the Engineer-in-charge.
- 13.5** Both parties shall comply with any conditions of the insurance policies.

#### **14. Site Investigation Reports**

- 14.1** The Contractor, in preparing the Bid, shall rely on any site Investigation Reports referred to in the Contract Data, supplemented by any information available to the Bidder.

#### **15. Queries about the Contract Data**

- 15.1** The Engineer-in-charge will clarify queries on the Contract Data.

#### **16. Contractor to Construct the Works**

- 16.1** The Contractor shall construct and install the Works in accordance with the Specification and Drawings, and as per instructions.
- 16.2** List of materials to be used in work is annexed with bid documents. Engineer-In charge reserves the right to change the brand of material to be used according to its availability in the market in case of emergency.

#### **17. The Works to Be Completed by the Intended Completion Date**

- 17.1** The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the program submitted by the Contractor, as updated with the approval of the Engineer-in-charge, and complete them by the Intended Completion Date.

#### **18. Approval by the Engineer**

- 18.1** The Contractor shall submit Specifications and Drawings showing the proposed Works to the Engineer, who is to approve them if they comply with the Specifications and Drawings.

#### **19. Safety**

- 19.1** The Contractor shall be responsible for the safety of all activities on the Site.

#### **20. Discoveries**

- 20.1** Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The Contractor is to notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

#### **21. Possession of the Site**

- 21.1** The Employer shall give possession of the Site/construction area to the Contractor, sufficient to carry out the construction activities.

#### **22. Access to the Site**

- 22.1** The Contractor shall allow the Engineer and any person authorized by the Engineer access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.
- 22.2** All the work under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer and his

senior/subordinate and the Contractor shall at all times during the usual working hours and at all other times at which reasonable notice of the intention of the Engineer or his senior/subordinate to visit the works shall have been given to the Contractor, either himself to be present to receive orders and instructions or have a responsible agent, duly accredited in writing, present for that purpose. Orders given to Contractor's agent shall be considered to have the same force as if they had been given to the Contractor himself.

## **23. Instructions**

- 23.1** The Contractor shall carry out all instructions of the Engineer, which comply with the applicable laws where the Site is located.
- 23.2** The Contractor shall permit the bank to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Bank, if so required by the Bank.

## **24. DISPUTE REDERESSAL MECHANISM**

If any dispute or differences of any kind what-so-ever arise between the employer/Corporation, its authorized representatives and the Contractor in connection with or arising out of this contract or the execution of work, these shall be resolved as under:-

- i) Whether before its commencement or during the progress of Project/Work or after the termination, abandonment or breach of the contract, the dispute shall in the first instance supported with complete documents and further documents, if any, required by him, be referred for settlement to the Engineer of the work and he shall, within a period of sixty (60) days after being requested in writing by the Contractor to do so, convey his decision to the Contractor. If the contractor is not satisfied with the decision of the Engineer or the Engineer do not convey his decision within a period of sixty (60) days then he shall make an appeal to the Chief Engineer/ Superintending Engineer incharge whose decision shall be final and binding upon the contractor. However, in case the work is already in process, the Contractor shall proceed with the execution of the works, including maintenance thereof, pending receipt of the decision of the Executive Engineer/Chief Engineer / Superintending Engineer, as the case may be as aforesaid, with all due diligence.
- ii) If the Chief Engineer / Superintending Engineer fails to convey his decision within a period of sixty (60) days from the date on which the said request was made by the contractor or decision conveyed by the Chief Engineer / Superintending Engineer is not acceptable to either of the party, then Either party will have further right of appeal against the decision of the Chief Engineer / Superintending Engineer to the Standing Empowered Committee constituted by the MD, PPHC, Mohali, the cost of which will be borne by both the parities on 50:50 basis. The payment will be made @ Rs.2000/- per member per day.
- iii) The Standing Empowered Committee shall consist of:-
  - a) Retd. Chief Engineer from Govt./Semi Govt. as Chairman
  - b) One official member not below the rank of Executive Engineer from PPHC as member
  - c) One non official member not below the rank of retired Executive Engineer as member selected by the contractor from a panel of 3 persons given to him by the employer.

## **25) Arbitration**

- 25.1** In view of the provision of the clause 24 on Dispute Rederessal Mechanism, it is the condition of the contract that there will be no arbitration for the settlement of any dispute between the

parties.

## **B. Time Control**

### **26. Program**

- 26.1** Within the time stated in the Contract Data the Contractor shall submit to the Engineer for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works along with monthly cash flow forecast.
- 26.2** An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.
- 26.3** The Contractor shall submit to the Engineer, for approval, an updated Program at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Program within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.
- 26.4** The Engineer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Engineer again at any time. A revised Program is to show the effect of Variations and Compensation Events.

### **27. Extension of the Intended Completion Date**

- 27.1** If the contractor shall desire an extension of the time for completion of the work on the ground of his having been unavoidably hindered in its execution or any other ground, he shall apply in writing to the Engineer (with corresponding time extension in Performance Security) within thirty (30) days of the date of hindrance (but before the expiry of time limit) on account of which he desires such extent in as aforesaid" and the competent authority shall if in his opinion (which shall be final) reasonable grounds be shown therefore, authorize such extension of time as may in his opinion be necessary or proper. No application for extension of time received late or addressed to the Sub-Divisional Engineer or any officer other than the Engineer shall be considered valid. If the contractor fails to apply for extension as aforesaid and the work is not completed within the time limit, the contract shall be determined absolutely after action under relevant clauses.
- 27.2** The Engineer shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Engineer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.
- 27.3** In case if there is any delay, attributable either to the contractor or the employer or to both, and the contractor seeks and obtains extension of time for execution on that account, he will not be entitled to claim compensation of any nature, on the ground of such delay, in addition to the extension of time obtained by him

### **28. Delays Ordered by the Engineer**

- 28.1** The Engineer may instruct the Contractor to delay the start or progress of any activity within

the Works.

## **29. Management Meetings**

- 29.1** Either the Engineer or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 29.2** The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

## **30. Early Warning**

- 30.1** The Contractor is to warn the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of works. The Engineer may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate is to be provided by the Contractor as soon as reasonably possible.
- 30.2** The Contractor shall cooperate with the Engineer in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer.

## **C. Quality Control**

### **31. Identifying Defects**

- 31.1** Contractor will set up a fully equipped material testing laboratory at site of work and employ a quality testing person fully qualified. The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.
- 31.2** The contractor shall permit the Employer's Technical auditor to check the contractor's work and notify the Engineer and Contractor of any defects that are found. Such a check shall not affect the Contractor's or the Engineer's responsibility as defined in the Contract Agreement.

### **32. Tests**

- 32.1** If the Engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

### **33. Correction of Defects**

- 33.1** The Engineer shall give notice to the Contractor of any Defects at any time during the construction or before the end of the Defects Liability Period,( which begins at Completion and is defined in the Contract Data). The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

- 33.2** Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Engineer's notice.

#### **34. Uncorrected Defects**

- 34.1** If the Contractor has not corrected a Defect within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected, and recover twice of this amount from the payments due to the Contractor or retention money.

Note: Where in certain cases, the technical specifications provide for acceptance of works within specified tolerance limits at reduced rates, Engineer will certify payments to Contractor accordingly and the Contractor shall be bound by the same.

#### **D. Cost Control**

#### **35. Bill of Quantities**

- 35.1** The Bill of Quantities shall contain items for the Supply, installation, testing, and commissioning work to be done by the contractor.
- 35.2** The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

#### **36. Changes in the Quantities**

- 36.1** The Engineer shall have power to make any variations, alterations omission, additions to or substitutions for the original specifications, drawings, designs and instructions that may appear to be necessary or advisable during the progress of the work, and the Contractor shall be bound to carry out the work in accordance with any instructions which may be given to him in writing, signed by the Engineer. Such alterations/additions/substitutions shall not invalidate the contract and shall be carried out by the Contractor on the same conditions in all respect on which he agreed to do the main work. The time of completion of the work shall be extended in the proportion that the altered, additional or substituted works bears to the original contract work and the certificate of the Engineer shall be conclusive as to such proportion.
- 36.2 i)** In case quantities of DNIT exceed beyond 10% then the payment shall be made at the rate decided by the MD, PPHC but it would be least of the two i.e. quoted rate or DNIT rate.
- ii) Any item not existing in the DNIT but actually executed at site as per CSR item then it shall be paid at the same rate at which the work has been allotted to the agency but in any case not above the CSR.
- iii) NS item as approved by the Managing Director, PPHC based on prevailing market rates at the time of execution.
- 36.3** If requested by the Engineer, the Contractor shall provide the Engineer with a detailed cost breakdown of any rate in the Bill of Quantities.

**36.3** Procurement of all type of material should be done with the consultation of Engineer –in-charge otherwise no claim will be entertained, due to change of quantities/scope.

#### **37. Variations**

**37.1** All Variations shall be included in updated Programs produced by the Contractor.

### **38. Payments for Variations**

**38.1** The Contractor shall provide the Engineer with a quotation (with breakdown of unit rates) for carrying out the Variation when requested to do so by the Engineer. The Engineer shall assess the quotation, which shall be given within seven days of the request or within any longer period stated by the Engineer and before the Variation is ordered.

**38.2** If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Engineer, the quantity of work above the limit stated in Sub Clause 37.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in form of new rates for the relevant items of work.

**38.3** If the Contractor's quotation is unreasonable, the Engineer may order the Variation and make a change to the Contract Price which shall be based on Engineer's own forecast of the effects of the Variation on the Contractor's cost.

**38.4** If the Engineer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

**38.5** The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

### **39. Cash flow forecasts**

**39.1** When the Program is updated, the contractor is to provide the Engineer with an updated cash flow forecast.

### **40. Payment Certificates**

**40.1** The Contractor shall submit to the Engineer monthly statements/bills of the estimated value of the work completed less the cumulative amount certified previously, along with copies of the following documents:-Measurements and quantities of items of work done since last bill

- (i) Copies of quality control tests in specified format covering the work done since last bill.
- (ii) Copies of instructions recorded in the instruction book containing the instructions and compliance made thereof, covering the work done since last bill. The Contractor shall submit all bills on proper printed invoice format as regulated by government or printed forms to be had on application from the office of engineer.

In case the contractor is unable to prepare the bill, he shall request in writing to the Engineer-in-charge for preparation of his bill and the measurements made by the Junior Engineer/Sub Divisional Engineer shall be final and binding upon the contractor

**40.2** The Engineer shall check the Contractor's monthly statements within 30 days and certify the amount to be paid to the Contractor after taking into account any deductions for advance payments, retention, other recoveries in terms of the contract and taxes at source, as applicable under the law, and the credit or debit for the month in question in respect of materials for the works in the relevant amounts and under conditions set forth in clause 46. The Contractor shall be required to sign the corrections made, if any, in token of acceptance of the same, before release of payment.



- 40.3 The value of work executed shall be determined by the Engineer.
- 40.4 The value of work executed shall include the valuation of Variations and Compensation Events. The Contractor shall be deemed to have waived off all claims not included in such bills/statements and will have no right to enforce any claim not so included, whatsoever be the circumstances..
- 40.5 The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in light of later information

#### **41. Payments**

- 41.1 The Engineer on behalf of Employer shall pay the Contractor the amounts certified by the Engineer.
- 41.2 Items of the Project/Work, for which no rate or price or percentage of lump sum rate has been entered in, will be paid as per rate approved by the employer.
- 41.3 Any excess payment made to the Contractor inadvertently or otherwise under this contract or on any account whatsoever and any other sum found to be due to the Government by the Contractor in respect of this contract or any other contract or work-order or any account whatsoever may be deducted from any sum payable by the Government to the Contractor either in respect of this contract or any work order or contract or any other account by any other department of the Government.
- 41.4 The Engineer may refuse or suspend payments on account of a work when executed by a firm or by a Contractor described in his bid as a firm, unless receipts are signed by all the partners, or one of the partners or an authorized representative of the Contractor who produces a valid authority in writing enabling him to give effectual receipts on behalf of the firm
- 41.5 All the intermediate payments shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed ; and shall not preclude the requiring of bad, unsound , imperfect or unskilled work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the performance of the contract or any part thereof in any respect of the occurring of any claim , nor shall it conclude , determine or effect in any way the powers of the Engineer under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way , vary or affect the contract
- 41.6 The receipt of the Accountant or Clerk for any money paid by the Contractor to the department will not be considered as a receipt of payment to the Engineer and the Contractor shall be responsible for ensuring that he procures a receipt duly signed by the Engineer or his Sub Divisional Engineer
- 41.7 Whenever any claim for the payment of a sum of money arises out of or under the contract against the contractor, the employer shall be entitled to recover such sum by appropriating in whole or in part, the security, if any, deposited by the contractor, and for the purpose aforesaid, shall be entitled to sell and/or realize securities forming the whole or part of any such security deposit. In the event of the security being insufficient, the balance and if no security has been taken from the contractor, the entire sum recoverable shall be recovered by appropriating any sum then due or which at any time thereafter may become due to the contractor under the contract or any other contract with the employer. If such sum even be not sufficient to cover the full amount recoverable, the contractor shall on demand pay to the purchaser the balance remaining due

#### **42. Compensation Events**

- 42.1 The following are Compensation Events unless they are caused by the Contractor
  - (a) The Engineer does not give access to a part of the Site as stipulated in Clause 22 by the Site Possession Date stated in the Contract Data

- (b) The Employer modifies the schedule of other Contractors in a way which affects the work of the Contractor under the contract.
- (c) The Engineer orders a delay or does not issue drawings , specification s and /or instructions required for execution of works on time.
- (d) The Engineer gives an instruction for dealing with an unforeseen condition, caused by the Employer, or other reasons.
- (e) The effect on the Contractor of any of the Employer's Risks.
- (f) The Engineer unreasonably delays issuing a Certificate of Completion.
- (g) Other Compensation Events listed in the Contract Data or mentioned in the Contract.

**42.2** If a Compensation Event would prevent the work being completed before the Intended Completion Date, the Intended Completion Date would be extended. The Engineer shall decide whether by how much the Intended Completion Date shall be extended.

#### **43. Tax**

**43.1** The rates quoted by the Contractor shall be deemed to be inclusive of all the taxes, levies, etc. including their variations as notified by the concerned authority from time to time, and also of all the new taxes and levies that may be imposed that the Contractor will have to pay for the performance of this Contract. The Engineer on behalf of the Employer will perform such duties in regard to the deduction of such taxes at source as per applicable law.

**43.2** The Contractor shall comply with the proper bye-laws and legal orders of the local body or public authority under the jurisdiction of which the work is executed and pay all fees and charges for which he may be liable. Nothing extra shall be payable on this account

#### **44. Currencies**

**44.1** All payments shall be made in Indian Rupees.

#### **45 Stores to be supplied by the Department- Not applicable**

#### **46. Retention**

**46.1** The Engineer on behalf of the Employer shall retain 5% of the amount of each payment due to the Contractor until Completion of the whole of the Project/Work to cover the cost that may be involved in removal of defects, imperfections, or taking remedial measures in the work executed. This retention shall be inclusive of the initial bid security deposited by the bidder.

**46.2** 50% of the total amount retained shall be repaid to the Contractor after three months of completion of the whole of the Project/Work as certified satisfactory by the Engineer with respect to removal of all defects, imperfections, short comings and taking remedial measures, that may be necessary and after recording of final measurements of work done, for which the certificate of the Engineer would be conclusive.

**46.3** The remaining amount of the retained money shall be repaid after one year or when the Defects Liability Period has passed, whichever is later, and after the Engineer has certified that all Defects notified by the Engineer to the Contractor before the end of this period have been corrected.

#### **47. Liquidated Damages**

**47.1** The Contractor shall ensure due diligence to achieve progress of work not less than that

indicated in the following milestones:-

- i) On Lapse of 25% contractual time : 10%
- ii) On Lapse of 50% contractual time : 30%
- iii) On Lapse of 75% contractual time : 65%
- iv) On Lapse of 100% (full) contractual time : 100%

In case of default, the Contractor shall, notwithstanding issuance of a prior notice in this regard, pay prospectively as liquidated damages an amount upto 1% of the amount of contract or such lesser amount that the Engineer may levy on behalf of the Employer, for every week of the period for which the work remains un-commenced after 10 days of the issue of acceptance letter; or the minimum progress of work stated above is not achieved; or the work remains unfinished after the completion date.

- 47.2** In case of continued default or shortfall in progress, the Engineer may go on enhancing the levy of liquidated damages, each time limited to 1% of the amount of contract per week of further default subject to maximum limit of five (5) percent of the Contract value.
- 47.3** The Chief Engineer / Superintending Engineer on representation from Contractor and after hearing both the Engineer and Contractor may reduce the amount of liquidated damages after passing speaking orders and his decision in writing shall be final and binding.
- 47.4** If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate.
- 47.5** If the Contractor fails to comply with the time for completion as stipulated in the tender, then the Contractor shall pay to the Employer (through the Engineer), the relevant sum stated in the Contract Data as Liquidated damages for such default and not as penalty for everyday or part of day which shall elapse between relevant time for completion and the date stated in the taking over certificate of the whole of the works on the relevant section, subject to the limit stated in the Contract Data.
- 47.6** If, before the Time for Completion of the whole of the Works or, if applicable, any Section, a Taking – Over Certificate has been issued for any part of the Works or of a Section, the liquidated damages for delay in completion of the remainder of the Works or of that Section shall, for any period of delay after the date stated in such Taking-Over Certificate, and in the absence of alternative provisions in the Contract, be reduced in the proportion which the value of the part so certified bears to the value of the whole of the Works or Section, as applicable. The provisions of this Sub- Clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof

## **48. Advance Payment**

### **48.1 Secured Advance:**

The Engineer shall make advance payment in respect of materials intended for but not yet incorporated in the Works in accordance with conditions stipulated in the Contract Data.

## **49. Securities**

- 49.1** The Performance Security as per detail given in Contract Data shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in Indian Rupees. The Performance Security shall be valid until a date 28 days from the date of expiry of Defects Liability Period.

## **50. Cost of Repairs**

- 50.1** Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

## **E. Finishing the Contract**

## **51. Completion**

- 51.1** The Contractor shall request the Engineer to issue a Certificate of Completion of the works and the Engineer, within 30 days of the receipt of such request, shall inspect the work and if there is no defect in the work, shall furnish the Contractor with a certificate of completion. Otherwise, the Engineer may issue a provisional certificate of completion indicating the defects (a) to be rectified by the Contractor and/or (b) for which payment shall be made at reduced rates. However no certificate, provisional or otherwise, shall be issued nor shall the work be considered to be complete until the Contractor has cleared all scaffolding, surplus materials, garbage and all huts and sanitary arrangements set up for the labour at the site and cleaned off the dirt from work.
- 52.2** No certificate for part completion of the work will be issued to the contractor

## **52. Taking Over**

- 52.1** The Employer shall take over the Site and the Works within seven days of the Engineer issuing a certificate of Completion.

## **53. Final Account**

- 53.1** The Contractor shall supply to the Engineer a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Engineer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the Contractor and issue a payment certificate, within 56 days of receiving the Contractor's revised account.

## **54. Operating and Maintenance Manuals**

- 54.1** If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.
- 54.2** If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

## **55. Termination**

- 55.1** The Engineer on behalf of the Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. For this purpose, 14 days notice in writing shall be served by either party on the other party clearly mentioning the particular grounds of Breach of Contract with a copy to the Employer
- 55.2** Fundamental breaches of Contract include, but shall not be limited to the following:

- (a) The Contractor stops work for 28 days when no stoppage of work is shown on the current programme and the stoppage has not been authorized by the Engineer;
- (b) The Employer or the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (c) The Engineer gives Notice that failure to correct a particular defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
- (d) The Contractor does not maintain a security which is required;
- (E) The Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract Data; and
- (f) If the Contractor, in the judgment of the Engineer or the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- (g) If the Contractor who has been given a notice in writing by the Engineer, fails to rectify, reconstruct or replace any defective work or continues the execution of work in an inefficient, improper, un workman – like manner or not in accordance with sound Engineering practices or without complying with the directions and requirements within a period of 10 days of the issue of said notice.
- (h) If the Contractor being a company shall pass a resolution or a court shall make an order of the effect that the company shall be wound up or if a receiver or a manager on behalf of the credit or shall be appointed or if circumstances shall arise which entitle the court of creditor to appoint a receiver or manager or to make a winding up order.
- (i) If the contractor who has been given notice in writing, fails to speed the work to complete it within time frame and the Engineer opines that work will not be completed in time.

**55.3** Notwithstanding the above, the Engineer on behalf of the Employer may terminate the Contract for convenience

**55.4** If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible

**55.5** After the termination of the contract under this clause, the Employer shall be at liberty to get the balance work executed through some other contractual agency or through departmental means or to abandon the balance work altogether or to modify the design and scope of the work in any manner. The Contractor shall have no claim against the Employer in this regard.

## **56. Payment upon Termination**

**56.1** If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done less advance payments received upto the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less 5% of the contract value towards compensation for the breach of contract. The total amount of liquidated damages and compensation for breach of contract shall, however, be limited to 7.5% of the contract value or the amount

available with the Engineer (in the shape of retention money, performance security and due amount of work done if any), whichever is less. The requisite amount for which the Contractor may become liable shall be realized by encasing the performance security furnished by the Contractor and/ or from other amounts due to the Contractor in respect of this work.

**56.2** If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Engineer shall issue a certificate for the value of the work done. This work value shall take into account the cost of balance material brought by the Contractor and available at site, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the works. The advance payment received upto to the date of the certificate, other recoveries due in terms of the contract and the taxes due to be deducted at source as per applicable law, shall be deducted from the work value.

### **56.3 No Compensation for Alteration in or Restriction in Works**

If at any time after the commencement of the work the Government, for any reason whatsoever, does not require the whole Project/Work or part thereof to be carried out, the Engineer shall give notice in writing of the fact to the Contractor, who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage, which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of work not having been carried out, neither shall he have any claim for compensation by reasons of any alteration having been made in the original specifications, drawings, designs and instructions, which shall involve any curtailment of the work originally contemplated.

## **57. Property**

**57.1** All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a Contractor's default.

## **58. Release from Performance**

**58.1** If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

## **F. Special Conditions of Contract**

### **1. LABOUR:**

The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

## 2. **COMPLIANCE WITH LABOUR REGULATIONS:**

During continuance of the contract, the Contractor and his sub contractors shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

### **SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK.**

- a) **Workmen Compensation Act 1923:** The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) **Payment of Gratuity Act 1972:** Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- c) **Employees P.F. and Miscellaneous Provision Act 1952:** The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are:
  - (i) Pension or family pension on retirement or death, as the case may be.
  - (ii) Deposit linked insurance on the death in harness of the worker.
  - (iii) Payment of P.F. accumulation on retirement/death etc.
- d) **Maternity Benefit Act 1951:** The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) **Contract Labour (Regulation & Abolition) Act 1970:** The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labour.
- f) **Minimum Wages Act 1948:** The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.
- g) **Payment of Wages Act 1936:** It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- h) **Equal Remuneration Act 1979:** The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- i) **Payment of Bonus Act 1965:** The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.21,000/-per month or less. The

bonus to be paid to employees getting Rs.7000/- per month or above upto Rs.21,000/- per month shall be worked out by taking wages as Rs.7000/-per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.

- j) **Industrial Disputes Act 1947:** The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- k) **Industrial Employment (Standing Orders) Act 1946:** It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- l) **Trade Unions Act 1926:** The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) **Child Labour (Prohibition & Regulation) Act 1986:** The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.
- n) **Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979:** The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishment and back, etc.
- o) **The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996:** All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- p) **Factories Act 1948:** The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

### 3. **SUB-CONTRACTING (GCC Clause 7)**

Please add the following as Clause 7.2:

The contractor shall not be required to obtain any consent from the employer for:

- a) the sub-contracting of any part of the Works for which the Sub-contractor is named in the contract;
- b) the provision of labour; and
- c) the purchase of materials which are in accordance with the standards specified in the Contract.

Beyond this if the contractor proposes sub-contracting any part of the work during execution of works, because of some unforeseen circumstances to enable him to complete the work as per terms of the contract, the Engineer will consider the following before according approval:

- The contractor shall not sub-contract the whole of the Works.



- The contractor shall not sub-contract any part of the Work without prior consent of the Engineer. Any such consent shall not relieve the contractor from any liability or obligations under the contract and he shall be responsible for the acts, defaults and neglects of any sub-contractor, his agents or workmen as fully as if they were the acts, defaults or neglects of the contractor, his agents or workmen.
- The Engineer should satisfy whether (a) the circumstances warrant such sub-contracting; and (b) the sub-contractors so proposed for the Work possess the experience, qualifications and equipment necessary for the job proposed to be entrusted to them in proportion to the quantum of work to be sub-contracted.
- If payments are proposed to be made directly to that sub-contractor, this should be subject to specific authorization by the prime contractor so that this arrangement does not alter the contractor's liability or obligations under the contract.

**4. ARBITRATION**

**Please Refer to Clause 24 DISPUTES RESOLUTION MECHANISM**

**5. PROTECTION OF ENVIRONMENT:**

Add the following as GCC Clause 16.2:

The contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

During continuance of the contract, the contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made thereunder, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.

Salient features of some of the major laws that are applicable are given below :

The Water (Prevention and Control of Pollution) Act, 1974, This provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

The Air (Prevention and Control of Pollution) Act, 1981, This provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The Environment (Protection) Act, 1986, This provides for the protection and improvement of environment and for matters connected therewith, & the prevention of hazards to human beings, other living creatures, plants and property. 'Environment' includes water, air & land the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.

The Public Liability Insurance Act, 1991, This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation, which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.

## **SECTION 4**

# **MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS**

# **MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS**

## **1. APPLICATION**

These rules shall apply to all buildings and construction works in which twenty or more workers are ordinarily employed or are proposed to be employed in any day during the period during which the contract work is in progress.

## **2. DEFINITION**

Work place means a place where twenty or more workers are ordinarily employed in connection with construction work on any day during the period during which the contract work is in progress.

## **3. FIRST-AID FACILITIES**

i) At every work place there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.

ii) The first-aid box shall be distinctly marked with a red cross on white back ground and shall contain the following equipment:-

a) For work places in which the number of contract labour employed does not exceed 50- Each first-aid box shall contain the following equipments :-

1. 6 small sterilized dressings.
2. 3 medium size sterilized dressings.
3. 3 large size sterilized dressings.
4. 3 large sterilized burn dressings.
5. 1 (30 ml.) bottle containing a two per cent alcoholic solution of iodine.
6. 1 (30 ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label.
7. 1 snakebite lancet.
8. 1 (30 gms.) bottle of potassium permanganate crystals.
9. 1 pair scissors.
10. 1 copy of the first-aid leaflet issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.
11. 1 bottle containing 100 tablets (each of 5 gms.) of aspirin.
12. Ointment for burns.
13. A bottle of suitable surgical antiseptic solution.

b) For work places in which the number of contract labour exceed 50, each first-aid box shall contain the following equipments.

1. 12 small sterilized dressings.
2. 6 medium size sterilized dressings.
3. 6 large size sterilized dressings.
4. (15 gms.) packets sterilized cotton wool.
5. 1 (60 ml.) bottle containing a two per cent alcoholic solution iodine.
6. 1 (60 ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label.
7. 1 roll of adhesive plaster.
8. 1 snake bite lancet.
9. 1 (30 gms.) bottle of potassium permanganate crystals.
10. 1 pair scissors.
11. 1 copy of the first-aid leaflet issued by the Director General Factory Advice Service and Labour Institutes /Government of India.
12. A bottle containing 100 tablets (each of 5 gms.) of aspirin.
13. Ointment for burns.
14. A bottle of suitable surgical antiseptic solution.

iii) Adequate arrangements shall be made for immediate recoupment of the equipment when necessary.

iv) Nothing except the prescribed contents shall be kept in the First-aid box.

v) The first-aid box shall be kept in charge of a responsible person who shall always be readily

available during the working hours of the work place.

vi) A person in charge of the First-aid box shall be a person trained in First-aid treatment, in the work places where the number of contract labour employed is 150 or more.

vii) In work places where the number of contract labour employed is 500 or more and hospital facilities are not available within easy distance from the works. First-aid posts shall be established and run by a trained compounder. The compounder shall be on duty and shall be available at all hours when the workers are at work.

viii) Where work places are situated in places which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or person suddenly taken ill to the nearest hospital.

#### **4. DRINKING WATER**

i) In every work place, there shall be provided and maintained at suitable places, easily accessible

ii) Where drinking water is obtained from an Intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.

iii) Every water supply or storage shall be at a distance of not less than 50 feet from any latrine drain or other source of pollution. Where water has to be drawn from an existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and waterproof.

iv) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

#### **5. WASHING FACILITIES**

i) In every work place adequate and suitable facilities for washing shall be provided and maintained for the use of contract labour employed therein.

ii) Separate and adequate cleaning facilities shall be provided for the use of male and female workers.

iii) Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition.

#### **6. LATRINES AND URINALS**

i) Latrines shall be provided in every work place on the following scale namely:-

a) Where female are employed there shall be at least one latrine for every 25 females.

b) Where males are employed, there shall be at least one latrine for every 25 males.

Provided that where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females as the case may be up to the first 100, and one for every 50 thereafter.

ii) Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.

iii) Construction of latrines : The inside walls shall be constructed of masonry or some suitable heat-resisting nonabsorbent materials and shall be cement washed inside and outside at least once a year, Latrines shall not be of a standard lower than borehole system.

iv) a) Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers "For Men only" or "For Women Only" as the case may be.

b) The notice shall also bear the figure of a man or of a woman, as the case may be.

v) There shall be at least one urinal for male workers up to 50 and one for female workers up to fifty employed at a time, provided that where the number of male or female workmen, as the case may be exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females up to the first 500 and one for every 100 or part thereafter.

vi) a) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.

b) Latrines and urinals other than those connected with a flush sewage system shall comply with the requirements of the Public Health Authorities.

vii) Water shall be provided by means of tap or otherwise so as to be conveniently accessible in or near the latrines and urinals.

viii) Disposal of excreta: - Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator. Alternately excreta may be disposed of by

putting a layer of night soil at the bottom of a pucca tank prepared for the purpose and covering it with

a 15 cm. layer of waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn to manure).

(x) The Contractor shall at his own expense, carry out all instructions issued to him by the Employer to effect proper disposal of night soil and other conservancy work in respect of the Contractor's workmen or employees on the site. The Contractor shall be responsible for payment of any charges which may be levied by Municipal or Cantonment Authority for execution of such on his behalf.

#### **7. PROVISION OF SHELTER DURING REST**

At every place there shall be provided, free of cost, four suitable sheds, two for meals and the other two for rest separately for the use of men and women labour. The height of each shelter shall not be less than 3 metres (10 ft.) from the floor level to the lowest part of the roof. These shall be kept clean and the space provided shall be on the basis of 0.6 sq.m. (6 sft) per head. Provided that the Employer may permit subject to his satisfaction, a portion of the building under construction or other alternative accommodation to be used for the purpose.

#### **8. CRECHES**

i) At every work place, at which 20 or more women worker are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bedroom.

ii) The rooms shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean.

iii) The Contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the bed room.

iv) The Contractor shall provide one ayaa to look after the children in the creche when the number of women workers does not exceed 50 and two when the number of women workers exceed 50.

v) The use of the rooms earmarked as creches shall be restricted to children, their attendants and mothers of the children.

#### **9. CANTEENS**

i) In every work place where the work regarding the employment of contract labour is likely to continue for six months and where in contract labour numbering one hundred or more are ordinarily employed, an adequate canteen shall be provided by the Contractor for the use of such contract labour.

ii) The canteen shall be maintained by the Contractor in an efficient manner.

iii) The canteen shall consist of at least a dining hall, kitchen, storeroom, pantry and washing places separately for workers and utensils.

iv) The canteen shall be sufficiently lighted at all times when any person has access to it.

v) The floor shall be made of smooth and impervious materials and inside walls shall be lime-washed or colour washed at least once in each year. Provided that the inside walls of the kitchen shall be lime-washed every four months.

vi) The premises of the canteen shall be maintained in a clean and sanitary condition.

vii) Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance.

viii) Suitable arrangements shall be made for the collection and disposal of garbage.

ix) The dining hall shall accommodate at a time 30 per cent of the contract labour working at a time.

x) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs shall not be less than one square meter (10 sft) per diner to be accommodated as prescribed in sub-Rule 9.

xi) a) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number.

b) Washing places for women shall be separate and screened to secure privacy.

xii) Sufficient tables stools, chair or benches shall be available for the number of diners to be accommodated as prescribed in sub-Rule 9.

xiii) a) 1. There shall be provided and maintained sufficient utensils crockery, furniture and any other equipments necessary for the efficient running of the canteen.

2. The furniture utensils and other equipment shall be maintained in a clean and hygienic condition.

b) 1. Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.

2. A service counter, if provided, shall have top of smooth and impervious material.

3. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipments.

xiv) The food stuffs and other items to be served in the canteen shall be in conformity with the normal habits of the contract labour.

xv) The charges for food stuffs, beverages and any other items served in the canteen shall be based on 'No profit, No loss' and shall be conspicuously displayed in the canteen.

xvi) In arriving at the price of foodstuffs, and other article served in the canteen, the following items shall not be taken into consideration as expenditure namely:-

a) The rent of land and building.

b) The depreciation and maintenance charges for the building and equipments provided for the canteen.

c) The cost of purchase, repairs and replacement of equipments including furniture, crockery, cutlery and utensils.

d) The water charges and other charges incurred for lighting and ventilation.

e) The interest and amounts spent on the provision and maintenance of equipments provided for the canteen.

xvii) The accounts pertaining to the canteen shall be audited once every 12 months by registered accountants and auditors.

#### 10. ANTI-MALARIAL PRECAUTIONS

The Contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Employer including the filling up of any borrow pits which may have been dug by him. The above rules shall be incorporated in the contracts and in notices inviting tenders and shall form an integral part of the contracts.

#### 11. AMENDMENTS

Government may, from time to time, add to or amend these rules and issue directions - it may consider necessary for the purpose of removing any difficulty which may arise in the administration thereof.

**SECTION 5**  
**CONTRACTORS' LABOUR**  
**REGULATIONS**

## **PUNJAB (I) PUBLIC WORKS DEPARTMENT "CONTRACTORS LABOUR REGULATIONS"**

### **1. SHORT TITLE**

These regulations may be called Punjab (I) Public Works Department Contractor's Labour regulations.

### **2. DEFINITION IN THE REGULATIONS**

Unless otherwise expressed or indicated the following word and expressions shall have the meaning here by assigned to the respectively that is to say.

(i) "LABOUR" mean workers employed by Punjab (I) Public Work Department Contractor directly or indirectly through a Sub-Contractor or other person or by an agent on his behalf.

(ii) "FAIR WAGES" means wages whether for time or piece work notified as the time of inviting tenders for the work and where such wages have not been to notified, the wages prescribed by the Punjab (I) Works Department for in which the work is done.

(iii) Contractor shall include every person whether a sub-Contractor or headman or agent employing labour on the works taken on contract.

(iv) "WAGES" shall have the same meaning as defined in the payment of Wages Act, 1936 and include times and rates wages.

### **3. DISPLAY OF NOTICES, REGARDING WAGES, ETC.**

The Contractor shall before the commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clean and legible conditions in conspicuous place on the work, notices in English and in the local Indian languages spoken by the majority of the workers giving the fair wages notified or prescribed by the Punjab (I) Public Work Department and the hours of work for which such wages are earned.

### **4. PAYMENT OF WAGES**

1. Wages due to every worker shall be paid to him directly.

2. All wages shall be paid in current or currency or both.

### **5. FIXATION OF WAGES PERIOD**

1. The Contractor shall fix wages periods in respect of which the wages shall be payable.

2. No wage period shall exceed one month.

3. Wages of every workman employed on the contract shall be paid before expiry of ten days after the last day of the wage period in respect of which the wages are payable.

4. When the employment of any worker is terminated by on behalf of the Contractor, the wages earned by him shall be paid before the expiry of the day succeeding one on which his employment is terminated.

5. All payments of wages shall be made on working day.

### **6. WAGES BOOK AND WAGE SLIPS etc.**

1. a). The Contractor shall maintain wages book of each worker in such form as may be convenient but the same shall include the following particulars.

b). Rate of daily or monthly wages.

c). Nature of work on which employed.

d). Total number of days worked during each wages period.

e). Total amount payable for the work during each wage period.

f). All deduction made from the wages with an indication in each cases of the ground for which the deduction is made.

2. The Contractor shall also maintain a wage slip for each worker employed on the work.

3. The authority competent to accept the contract may grant and exemption from the maintenance of wage book and wage slips to a Contractor who in his opinion may not directly or indirectly employ more than 100 persons on the work.

### **7. FINES AND DEDUCTION WHICH MAY BE MADE FROM WAGES**

The wages of a worker shall be paid to him without any deduction of any kind except following:

(a) Fines

(b) Deductions for absence from duty i.e. from the place or places where by the terms of his employment, he is required the work the amount of deduction shall be in proportion to the period which he was absent.

(c) Deductions for damages to or loss of goods expressly entrusted to the employed person for custody or for loss of money for which he is required to account, where such damage or loss is directly



attributable to his neglect or default.

(d) (i) Any other deductions which the P.W.D. may from time to time allow.

(ii) No fine shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deduction.

#### **8. REPORT OF LABOUR WELFARE OFFICER:**

The Labour Welfare Officer or any other person authorized as aforesaid shall submit a report of the results of his investigations or enquiry to the Executive-Engineer concerned, indicating the extent, if any, to which the default has been committed and the amount of fine recoverable in respect of the act of omission and commission of the labourer with a note that necessary deduction from the Contractor will made and the wages and other dues be paid to the labourers concerned.

#### **9. APPEALS AGAINST THE DECISION OF LABOUR WELFARE OFFICER;**

Any person aggrieved by the decision and recommendation of Labour Welfare Officer person so authorised may appeal against such decision to the Labour Commissioner, but subject to such appeal, the decision of the Officer shall be final and binding upon the Contractor. 12 a No party shall be allowed to be represented by a lawyer during any investigation enquiry appeal or any other proceeding under these regulations

#### **10. INSPECTION OF REGISTER**

The Contractor shall allow inspection of Wage and Wage slips to any of his worker or to his agent at a convenient time and place after due notice is received by the Punjab (1) Government on his behalf.

#### **11. SUBMISSION OF RETURNS**

**The Contractor shall submit periodical returns as may be specified from time to time.**

#### **12. AMENDMENTS**

The Punjab (1) Government may from time to time add or amend these regulations. The decision of the labour Commissioner Punjab (1) Government in the behalf shall be final.

(a) The Contractor shall pay not less than fair wage to laborers engaged by him on the work, Fair wage means wage whether for time to piece work notified, at the time of inviting tender for the work and where such wages have not been so notified, the wages prescribed by the public Works. Department Building and Roads Branch Punjab (1) for the district in which the work is done.

(b) The Contractor shall not withstanding the provision of any agreement to the contract caused to be paid fro wage to labourers indirectly engaged on the work, including any labour engaged by his sub-Contractors in connection with the said word as if the labourers had been directly employed by him.

(c) In respect of all labour directly or indirectly employed on the work for the performance of the Contractor's part of this agreement the Contractor shall comply with or carse to be complied with the Punjab (1) Public Works Deptt. Contractor's Labour Regulations made by Govt. from time to time in regard to payment of Wages, Wage period, Deduction from wages, recovery of wages not paid and deductions unauthorizely made intendancy of wage book, wage slips, publication of wages and other terms of employment, inspection and submission of periodical returns and all other matters of alike nature.

(d) The Executive Engineer or Sub Division Engineer concerned shall have the right to deduct from the moneys due to the Contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of no fulfillment of the conditions of the contract from benefit of the workers, nonpayment of wages deductions made from his or their ages, which are not justified by the terms of the contract of the regulations referred to in clause (c) above.

(e) Vis-à-vis the Punjab (1) Government the Contractor shall be primarily liable of all payment to be made under and for the observation of the regulations aforesaid without prejudice to his right to claim indemnity from his sub Contractors.

(f) The regulation aforesaid shall be deemed to be part to his Contractor and any breach thereof shall be deemed to be breach of his contract.

#### **SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORKS**

**a) Workmen Compensation Act 1923 :** The act provides for compensation in case of injury by accident arising out of and of course of employment.

**b) Payment of Gratuity Act 1972 :** Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if any employee has completed 5 years service or more, on death, the rate of 15 days wages for every completed year of service. The act is applicable to establishments employing 10 or more employees.

**c) Employees PF and Misc. Provision Act 1952 –** The Act provides for monthly contributes by the employer plus workers @ 10% or 8.33% The benefits payable under the Act are :

i) Pension or family pension on retirement or death, as the case may be.

ii) Deposit linked insurance on the death in harness of the worker.

iii) Payment of P.F. accumulation on retirement/death etc.

**d) Maternity Benefit Act 1951 :** This act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

**e) Contract Labour (Regulation & Abolition Act 1970 :** The act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided by the Principal Employer by Law. The Principal Employer is required to take certificate of registration and the Contractor is required to take licence from the designated officer. The act is applicable to the establishments or Contractor of Principal Employer, if they employ 20 or more contract labour.

**f) Minimum Wages Act 1948 :-** The Employer is supposed to pay not less than the Minimum wages fixed by appropriate Government as per provisions of the Act, if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.

**g) Payment of Wages Act 1936 :** It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

**h) Equal Remuneration Act 1979 :-** The Act provided for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.

**i) Payment of Bonus Act 1965:** The act is applicable to all establishments employing 20 or more employees. The act provides for payments of annual bonus subject to a minimum 8.33% of wages and maximum 20% of wages to employees drawing Rs. 3500/- per month or less. The bonus is to be paid to employees getting Rs. 2500/- per month or above upto Rs. 3500/- per month shall be worked out by taking wages as Rs. 2500/- per month only. The act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.

**j) Industrial Dispute Act 1947:** The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

**k) Industrial Employment (Standing Orders) Act 1946:** It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the State and Central Government to 50). The act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority

**l) Trade Unions Act 1926 :** The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade unions registered under the act have been given certain immunities from civil and criminal liabilities.

**m) Child Labour (prohibition & regulation) Act 1986 :** The act prohibits employment of children below 14 years of age in certain occupation and processes and provides for regulation of employment of children in all other occupations and progress. Employment of Child labour is prohibited in Building and Construction Industry.

**n) Inter State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act**

**1979 :** The act is applicable to an establishment which employs 5 or more interstate migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state) The inter State migrant workmen in an establishment to which this act becomes applicable, are required to be provided certain facilities such as housing, medical and traveling expenses from home upto the establishment and back etc.

**o) The Building and Other Construction Workers (Regulation of Employment and**

Conditions of Service) Act 1996 and the Cess Act of 1996 :- All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this act. All such establishments are required to pay cess at the rate no exceeding 25 of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as Canteens, First Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

p) **Factories Act 1948** : The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

## **SECTION 6: CONTRACT DATA**

## **CONTRACT DATA**

**Items marked "N/A" do not apply in this Contract.**

The following documents are also part of the Contract:

- The Schedule of Operating and Maintenance Manuals
- The Schedule of Other Contractors
- The Schedule of Key Personnel

The above insertions should correspond to the information provided in the Invitation of Bids.

The Employer is

Name: Managing Director, PPHC, Sahibzada Ajit Singh Nagar (1.1)

Address: Police Complex, Phase-VII, (Sector-61), Sahibzada Ajit Singh Nagar

The Engineer is the Engineer in-charge of work as deputed by the PPHC (1.1)  
to get the work executed at site or any other person deputed on his behalf

Name: Executive Engineer(Elect), PPHC, SS.A.S. Nagar.

Name of Authorized Representative: Sub Divisional Engineer, (Elect) S.A.S. Nagar

The name and identification number of the Contract is\_\_\_\_\_

The Works consist of Work of SITC of Surveillance System in the S.A.S. Nagar city.

The Start Date shall be the date of issue of notice to proceed with the work.

The following documents also form part of the Contract:

The Intended Completion Date for the whole of the **Works is 4 months with the following milestones:**

- i)On Lapse of 25% contractual time : 10%
- ii)On Lapse of 50% contractual time : 30%
- iii)On Lapse of 75% contractual time : 65%
- iv)On Lapse of 100% (full) contractual time : 100%

The Contractor shall submit a revised Program for the Works within 15 days of delivery of the Letter of Acceptance.

The Defects Liability Period is **365** days from the date of certification of completion of works. (Where sectional completion certificate is issued this will apply from those dates for those sections).

The amounts of the advance payment are:

Nature of Advance	Amount (Rs.)	Conditions to be fulfilled
1. Secured advance for non-perishable materials brought to site	75% of Invoice value or Market value - lower of the two.	<p>a) The materials are in-accordance with the specification for Works;</p> <p>b) Such materials have been delivered to site, and are properly stored and protected against damage or deterioration to the satisfaction of the Engineer. The contractor shall store the bulk material in measurable stacks.;</p> <p>c) The Contractor's records of the requirements, orders, receipt and use of materials are kept in a form approved by the Engineer and such records shall be available for inspection by the Engineer;</p> <p>The contractor has submitted with his monthly statement the estimated value of the materials on site together with such documents as may be required by the Engineer for the purpose of valuation of the materials and providing evidence of ownership and payment thereof;</p> <p>e) Ownership of such materials shall be vest in the Employer for which he has submitted an Indemnity Bond in an acceptable format; and</p> <p>f) The quantities of materials are not excessive and shall be used within a reasonable time as determined by the Engineer.</p>

Repayment of advance payment for mobilization and equipment:

The advance shall be repaid from each succeeding monthly payments to the extent materials [for which advance was previously paid pursuant to Clause 48.4 of C.C. and 3 of Contract Data on pre page] have been incorporated into the Works.<sup>4</sup>

The Securities shall be for the following minimum amounts equivalent as a percentage of the Contract Price:

Performance Security for 10 per cent of contract price plus Rs. .... as additional security in terms of ITB

The standard form of Performance Security acceptable to the Employer shall be an unconditional Bank Guarantee of the type as presented in Section 8 of the Bidding Documents.

\*The date by which “as-built” drawings (in scale 1:100) in 2 sets are required is within 28 days of issue of certificate of completion of whole or section of the work, as the case may be

The final bill will be released after receipt of As Built Drawings..

The liquidated damages shall be as per Clause-47 of the conditions of Contract  
(Section-3)

## **SECTION : 7 ADDITIONAL CONDITIONS**



## **ADDITIONAL CONDITIONS**

1. Tenders of manufacturers or reputed firms, who are **authorized by the Original manufacturers**, will only be accepted.
2. OEM certified Compliance Sheet for the products mentioned in the BOQ **must be submitted alongwith tender**.
3. **Payments:-** The contractor shall not be entitled for any payment on account of work done by him till he signs the agreement and the same is accepted by the competent authority. The payment will be released on Pro-Rata basis.
4. Unless otherwise specified in the schedule of quantities, the rates for respective items shall be all inclusive and apply to the following: -
  - (i) All lifts & all heights, floors including terrace, leads and depths.
  - (ii) All taxes, duties, transportation charges up to site, octroi, insurance charges, tools and plants, labour, tools and plants and other inputs involved in the execution of the item.
  - (iii) Any of the conditions and specifications mentioned in the tender documents.
  - (iv) Performance test of the entire installation(s) before the work is finally accepted.
  - (v) All incidental charges for cartage, storage and safe custody of materials brought to site.
5. No escalation over the quoted rates shall be admissible during execution of work.
6. The contractor shall be responsible for the watch and ward / guard of the material/services, safety of all fittings arranged/ installed by him against pilferage till the work is handed over to the Department. No extra payment shall be made on this account.
7. The work should be planned in a systematic manner so that trench/ chase cuttings in the roads is minimized. The contractor shall ensure proper co-ordination of various authorities viz. Municipal Corporation, Deptt. Of sanitary & water supply/horticulture & electricity etc.
8. Contractor shall take all precautionary measures to avoid any damage to Govt. infrastructure. All necessary arrangement shall be made at his own cost.
9. The contractor shall procure the required materials in advance so that there is sufficient time for testing of the materials and approval of the same before use in the work.
10. All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.

11. The Contractor will have to submit 'As built drawings' and Operating/Maintenance Manual (in duplicate) after completion of work. Final payment of the work will be released after submission of these documents.
12. In case the firm does not adhere to the OEM's maintenance schedule attending of complaints as mentioned above, the same shall be got done and attended to at the risk and cost of firm and amount the expenditure incurred will be recovered from the firm from his pending dues/ security deposit.
13. During the free maintenance period the agency will be liable to remove all the minor faults with 24 hours and the major faults within 7 days, otherwise penalty @ Rs. 500/- per day will be imposed for the delayed period. Works shall be executed strictly in accordance with the Punjab Public Works Department Specifications. One thousand nine hundred and sixty three edition with-latest amendments and to the entire satisfaction of the Engineer-in-charge.
14. The Executive Engineer reserves the option to take away any item of work or any part thereof at any time during the currency of contract and to reallocate it to any other agency with due notice to the Contractor without liability of any kind of payment of any compensation.
15. Any material left at site on month after completion of work shall become the property of the Corporation and no payment shall be made to the contractor for the material.
16. The contractor has to make his own arrangement for all items/all materials required directly or indirectly for completion of work at his own cost.
17. Surplus earth from excavation of foundations or basements shall be placed by the contractor at the places approved by the Engineer-in-charge. No earth so excavated shall be sold by the contractor to any private parties.
18. No pits should be dug by the contractor near the site of work taking out earth for use on the work. In case of default the pits so dug will be filled in by the corporation at the cost of the contractor plus fifteen percent departmental charges.
19. The contractor will make his own arrangements for water required for works. If he does not arrange water at his own level and use water from some Govt. sources, recovery as applicable shall be made.
20. The arrangement of Electric supply required for construction purposes shall be made by the contractor at his own cost.

21. No compensation shall be payable for any damaged caused to materials, unfinished or finished items or work due to rain, floods or any other act of God.
22. The contractor will arrange his own tools and plants required for work.
23. The jurisdiction of Civil Court for matters under dispute shall be on the basis of the location of work.
24. The Contracting Agency will supply its Employee Provident Fund Code No. before execution of Contract Agreement with PPHC and will submit to PPHC clearance certificate from the Regional Provident Fund Commissioner Authorities from time to time. Security of the Contracting agency will be released only after the Contracting agency will supply NOC from the Regional Provident Fund Commissioner Authorities.
25. Rate of NS Item shall be submitted by the Contractor for approval on the basis of prevailing market rates at the time of execution.
26. The agency will follow the COVID-19 guidelines issued by the Govt. applicable at the time of execution of work.

## **SECTION 8: BILL OF QUANTITIES**

**SECTION (8)**  
**BILL OF QUANTITIES**

**(A) PREAMBLE**

1. The bill of quantities shall be read in conjunction with the instruction to bidders, general and special conditions of contract, technical specifications and drawings.
2. The quantities given in the bill of quantities are estimated and provisional and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the contractor and verified by the engineer and valued.
3. The rates and prices tendered in the priced bill of quantities shall except in so far as it is otherwise provided under the contract include all constructional plant, labour supervision, materials, erection, maintenance, insurance profit, taxes and duties, together with the all general risks, liabilities and obligations set out in the contract.
4. Arithmetic errors will be corrected by the Employer pursuant to of the ITB.
5. Nothing Extra will be paid due to losses/damages caused by Rains/Floods, War, epidemic, strike of the departmental officials or any other act of God or any other cause whatsoever.
6. Any error, omission in nomenclature rate and unit will be corrected, rectify as per CSR and Punjab. PWD specifications corrected upto date.

Name : Full Signatures of Contractor :

Notes:

- (1) The item for which no rate or price has been entered in will not be paid for by the Employer when executed and shall be deemed to be covered by the other rates and prices in the Bill of Quantities.
- (2) Where there is a discrepancy between the rate in figures and words, the rates in words will govern.
- (3) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by quantity, the unit rate quoted shall govern.

**Contractor**  
**Mobile No.**

**Witness**

**Executive Engineer**

## **Special Condition**

**In Pursuant to Clause no. 43.1 and 43.2 taxes, levies include service tax, Labour cess and GST etc.**

## **SECTION 9: FORMS OF SECURITIES**

## **Forms of Securities**

Acceptable forms of securities are annexed. Bidders should not complete the Performance and Advance Payment Security forms at this time. Only the successful Bidder will be required to provide Performance and Advance Payment Securities in accordance with one of the forms, or in a similar form acceptable to the Employer.

**Annex A:** Bid Security (Bank Guarantee)

**Annex B:** Performance Bank Guarantee

**Annex B1:** Performance Bank Guarantee for Unbalanced Items

**Annex C:** Deleted

**Annex D:** Bank Guarantee for Advance Payment



**BID SECURITY (BANK GUARANTEE)**

WHEREAS, \_\_\_\_\_ [name of Bidder] (hereinafter called "the Bidder") has submitted his Bid dated \_\_\_\_\_ [date] for the construction of \_\_\_\_\_ [name of Contract] (hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that We \_\_\_\_\_ [name of bank] of \_\_\_\_\_ [name of country] having our registered office at \_\_\_\_\_ (hereinafter called "the Bank") are bound unto \_\_\_\_\_ [name of Employer] (hereinafter called "the Employer") in the sum of \_\_\_\_\_<sup>1</sup> for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

THE CONDITIONS of this obligation are:

- (1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity specified in the Form of Bid;
- or
- (2) If the Bidder having been notified of the acceptance of his bid by the Employer during the period of Bid validity:
- (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or
  - (b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders; or
  - (c) does not accept the correction of the Bid Price pursuant to Clause 27;

we undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or any of the three conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date \_\_\_\_\_<sup>2</sup> days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE \_\_\_\_\_ SIGNATURE OF THE BANK \_\_\_\_\_

WITNESS \_\_\_\_\_ SEAL \_\_\_\_\_

\_\_\_\_\_  
[signature, name, and address]

- 1 The Bidder should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 16.1 of the Instructions to Bidders.
- 2 45 days after the end of the validity period of the Bid.

**PERFORMANCE BANK GUARANTEE**

To: \_\_\_\_\_ [name of Employer]  
 \_\_\_\_\_ [address of Employer]

WHEREAS \_\_\_\_\_ [name and address of Contractor] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. \_\_\_\_ dated \_\_\_\_\_ to execute \_\_\_\_\_ [name of Contract and brief description of Works] (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of \_\_\_\_\_ [amount of guarantee]  
<sup>1</sup>\_\_\_\_\_ [in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of \_\_\_\_\_ [amount of guarantee]<sup>1</sup> as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until ..... (i.e.) 28 days from the date of expiry of the Defects Liability Period.

Signature and seal of the guarantor \_\_\_\_\_  
 Name of Bank \_\_\_\_\_  
 Address \_\_\_\_\_  
 Date \_\_\_\_\_

1 An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.

**PERFORMANCE BANK GUARANTEE (for unbalanced items)**

To: \_\_\_\_\_ [name of Employer]  
 \_\_\_\_\_ [address of Employer]

WHEREAS \_\_\_\_\_ [name and address of Contractor] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. \_\_\_\_ dated \_\_\_\_\_ to execute \_\_\_\_\_ [name of Contract and brief description of Works] (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of \_\_\_\_\_ [amount of guarantee]  
<sup>1</sup>\_\_\_\_\_ [in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of \_\_\_\_\_ [amount of guarantee]<sup>1</sup> as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until ..... (i.e.) 28 days from the date of issue of the certificate of completion of works.

Signature and seal of the guarantor \_\_\_\_\_  
 Name of Bank \_\_\_\_\_  
 Address \_\_\_\_\_  
 Date \_\_\_\_\_

1 An amount shall be inserted by the Guarantor, representing additional security for unbalanced Bids, if any and denominated in Indian Rupees.

**Annexure D**

**BANK GUARANTEE FOR ADVANCE PAYMENT**

To: \_\_\_\_\_ [name of Employer]  
\_\_\_\_\_ [address of Employer]  
\_\_\_\_\_ [name of Contract]

Gentlemen:

In accordance with the provisions of the Conditions of Contract, sub-clause 48.1 ("Advance Payment") of the above-mentioned Contract, \_\_\_\_\_ [name and address of Contractor] (hereinafter called "the Contractor") shall deposit with \_\_\_\_\_ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of \_\_\_\_\_ [amount of guarantee]<sup>1</sup> \_\_\_\_\_ [in words].

We, the \_\_\_\_\_ [bank or financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to \_\_\_\_\_ [name of Employer] on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding \_\_\_\_\_ [amount of guarantee]<sup>1</sup> \_\_\_\_\_ [in words].

We further agree that no change or addition to or other modification of the terms of the Contract or of Works to be performed there under or of any of the Contract documents which may be made between \_\_\_\_\_ [name of Employer] and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until \_\_\_\_\_ [name of Employer] receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and seal: \_\_\_\_\_  
Name of Bank/Financial Institution: \_\_\_\_\_  
Address: \_\_\_\_\_  
Date: \_\_\_\_\_

<sup>1</sup> An amount shall be inserted by the bank representing the amount of the Advance Payment, and denominated in Indian Rupees.

## **SECTION 10: SUMMARY OF WORK**

## 1. Eligibility Criteria

For each category of pre-qualification criteria, the documentary evidence is to be produced duly certified-signed in ink with seal by authorized signatory of the Sole / Lead Bidder(s), serially numbered and enclosed with pre-qualification / technical bids. If the documentary proof is not enclosed for any/all criteria the Tender is liable for rejection. The Sole / Lead Bidder(s) shall meet the following schedule wise criteria for eligibility.

### 1.1) Eligibility Criteria of Bidder:

For each category of pre-qualification criteria, the documentary evidence is to be produced duly certified-signed in ink with seal by authorized signatory of the Sole / Lead Bidder(s), serially numbered and enclosed with pre-qualification / technical bids. If the documentary proof is not enclosed for any/all criteria the Tender is liable for rejection.

The Sole / Lead Bidder(s) shall meet the following schedule wise criteria for eligibility.

S. No.	Criteria	Documentary Evidence*
1.	<p>a. The bid shall be submitted by an individual organization; JV/ Consortium is allowed for this Project.</p> <p>b. The Sole/ Lead Bidder should be an IT company and specializing in CCTV Surveillance system or in System Integration along with Facility Management Services for IT Infrastructure and solutions</p> <p>c. The Sole Bidder and each of Consortium members <b>(Lead + max. 1 member)</b>, should be registered under Companies Act, 1956/ 2013 or as amended (from time to time) or an LLP registered under LLP Act 2008/ Partnership firm under Partnership Act 1932 or a Registered Trust/ NGOs.</p> <p>d. The Sole Bidder or the Lead Bidder and each consortium member in case of a Consortium should have completed at least 5 years of Operations in India as on bid submission date.</p>	<p>i. Copy of Certification of Incorporation/ Registration Certificate</p> <p>ii. Memorandum of Association and Articles of Association</p> <p>iii. Work order/Purchase Order/ Contract Agreement to show that the Bidder has been in Operations for atleast 5 years in India</p>
2.	<p><b>Average Annual Turnover from CCTV surveillance systems during the last three financial years (FY 2017-18, 2018-19, 2019-20)</b></p> <p>i) <b>In case of sole bidder</b> The Sole Bidder should have an average annual turnover of INR 20 Crores.</p> <p>ii) <b>In case of a Consortium</b></p> <p>a) Lead Bidder – Min. INR 15 crore</p> <p>b) Each Consortium member having Min. INR 5 crore.</p>	<p>i. Audited financial statements for the last three FYs.</p> <p><b>AND</b></p> <p>ii. Certificate from the Statutory Auditor/ Chartered Accountant on turnover details for the last three FYs. The certificate must have</p>

S. No.	Criteria	Documentary Evidence*
		UDIN issued by ICAI.
3.	<p><b>Positive Net-worth</b></p> <p>The bidder should have a positive net-worth in all the last 3 FYs (2017-18, 2018-19, 2019-20)</p>	<p>Certificate from the Statutory Auditor/ Chartered Accountant on positive net-worth for the last three (3) financial years. The certificate must have UDIN issued by ICAI</p>
4.	<p><b>Project experience</b></p> <p>The Sole Bidder or any of Consortium members should have an experience, in India, of executing projects at-least 1 project, as per following details, during the last 5 years as on bid submission date.</p> <p><b>CCTV Surveillance projects</b> – Supply, Installation, Operations and Maintenance of city-wide video surveillance systems (With Analytic) connected by IP network having Command and Control Centre with minimum value of INR 4.0 Crores and minimum 200 numbers of cameras in Government organizations such as Defence (Army, Navy, Airforce), Para-military Forces, State Police Departments.</p>	<p>i. Work order/Purchase Order/ Contract Agreement</p> <p>ii. Satisfactory Client Certificate from the concerned authority on the name of bidder along-with work order mentioning the value of the work order and scope of services</p>
5.	<p>The Sole / Lead Bidder should have a valid GST.</p> <p>Note: If Bidder Don't have registered with Punjab GST at the time of bid submission, Sole/ Lead Bidder shall furnish an undertaking that they shall get registered within 45 days of selection as Successful Bidder</p>	<p>i. Copy of GST Registration certificate</p>
6.	<p>The Sole Bidder or any of Consortium members, should jointly possess any two (2) of the below certifications, which are valid at the time of bidding:</p> <p>i. ISO 9001:2008/ ISO 9001:2015 for Quality Management System</p> <p>ii. ISO 27001:2013 for Information Security Management System</p> <p>iii. CMMi Level 3 or above for Capability Maturity Model Integration</p> <p><b>Note:</b> Each member of the Consortium should possess minimum one (1) of the above valid certification</p>	<p>The sole bidder or any of the consortium members-</p> <p>i. Copies of valid certificates</p> <p><b>AND</b></p> <p>For CMMi level 3 or above</p> <p>ii. Copies of valid certificates</p> <p><b>OR</b></p> <p>In case the bidder is in the process of re-certification of CMMi level 3 or above, then the copy of expired</p>

S. No.	Criteria	Documentary Evidence*
		certificate and present assessment certificate from duly authorised CMMi auditor to be enclosed.
7.	The Bidder should have direct authorization from the Original Equipment Manufacturer (OEM) for selling and providing support services on the equipment's offered.	Manufacturer's Authorization Form to be submitted as per the Format
8.	<p>The Sole Bidder and each of Consortium members and its Partner/ Directors should not have been blacklisted/ debarred by any Central Government/ State Government/ PSU or any other Government Institution/ Authority in India/ Multi-lateral funding agency due to unsatisfactory performance, breach of general or specific corrupt / fraudulent or any other unethical business practices.</p> <p>Also, have not been under any legal action for indulging in corrupt practice, fraudulent practice, coercive practice, undesirable practice, breach of contract or restrictive practice with any Indian Central Government/ State Government in last three (3) years as on bid submission date and the same must have been revoked prior to bid submission</p>	The Sole Bidder and each of Consortium members shall furnish an undertaking signed by the Authorized signatory of the company to be provided on Non – judicial stamp paper duly attested by notary public.
9.	<p>The Bidder should have a local office in Mohali/ Chandigarh/ Panchkula or Punjab State.</p> <p>Note: In case Bidder has no presence in Punjab at the time of bid submission, Sole / Lead Bidder shall furnish an undertaking that an office shall be opened in Punjab, with sufficient personnel and inventory of spares within a month of selection as Successful Bidder.</p>	<p>i. Copy of Rent Agreement/ Copy of Telephone Bill/ Copy of Electricity Bill.</p> <p><b>(OR)</b></p> <p>ii. Undertaking with duly signed by competent authority of organization stating it will be opened within thirty (30) days from Contract signing date.</p>

### 1.2) **Mandatory Requirement of OEM:**

- a) The OEM should be in the business for the last 5 financial years in India.
- b) The OEMs should have customer support in India.
- c) The OEMs should have at least 1 reference in India for surveillance system having



minimum deployment of 150 cameras.

- d) The OEMs should have option of supporting customers directly if needed & the support information including delivery against defectives or status of case should be available through web portals. (A certificate from OEM to provide support for the products with pre-qualification bid)
- e) The OEM should have ISO 9001:2008 / ISO 20000/ ISO 27001 certification.
- f) The quoted products/ Items/Spares/Service for the project should not be End of Life (EOL) for 7 Years from the date of bid submission. **Undertaking of OEM is required with technical bid.**
- g) The parent company or OEM or any promoter of OEM directly /indirectly should not be from or belong to the countries sharing land borders with India.

The Sole / Lead Bidder must submit the all supporting documents along with their pre-qualification bid.

### 1.3) Technical Evaluation Criteria

S. No.	Criteria Category	Evaluation Criterion	Max. Marks	Supporting Documents required*
A	<b>Bidder's profile (Max Marks: 25)</b>			
A1	Average Annual Turnover from CCTV Surveillance systems of the Sole Bidder or in case of a Consortium, combined turnover of lead bidder and partners/ consortium members.	<p>Average annual turnover from IT/ ICT systems (It shall be of CCTV Surveillance system) over the last three financial years (FY 2017-18, 2018-19, 2019-20). Marks shall be allotted as given below:</p> <ul style="list-style-type: none"> <li>• More than INR 30 Crores = 15 marks</li> <li>• More than INR 25 Crores – up to INR 30 Crores = 12 marks</li> <li>• &gt;= INR 20 Crores – up to 25 Crores = 08 marks</li> </ul>	15	Certificate from the Statutory Auditor / Chartered Accountant on turnover details from the over the last three (3) financial years (FY 2017-18, 2018-19, 2019-20)
A2	Certifications of the Sole Bidder and each of Consortium members	<p>The Sole Bidder or any of Consortium members should jointly possess below certifications which are valid at the time of bidding:</p> <ul style="list-style-type: none"> <li>i. ISO 9001:2008/ ISO 9001:2015 for Quality Management System</li> </ul>	5	Copies of valid certificates

S. No.	Criteria Category	Evaluation Criterion	Max. Marks	Supporting Documents required*
		ii. ISO 27001:2013 for Information Security Management System  iii. CMMi Level 3 or above for Capability Maturity Model Integration  Marks shall be allotted as given below:  i. No. of certifications (3) - 5 marks  i. No. of certifications (2) - 3 marks		
<b>B</b>	<b>Project Experience (Max Marks: 40)</b>			
B1	CCTV Surveillance projects including Supply, Installation, Operations and Maintenance of city-wide video surveillance systems connected by IP network) with minimum value of INR 4 Crores and minimum 200 numbers of cameras	The Sole Bidder or any of Consortium members should have experience, in India, of executing of CCTV Surveillance Project (should have been completed/ declared "Go-live" by the Client) during the last five years as on bid submission. <ul style="list-style-type: none"> <li>No. of project (3) - 30 marks</li> <li>No. of project (2) - 20 marks</li> <li>No. of project (1) -15 marks</li> </ul>	30	Work order/ purchase order/ agreement   AND  Client's Certificate for completion or declared Go-Live
B2	Experience of command and control centre with value Rs. 75 lakh (of Command & Control Centre) and above covering min. 2 out of following components namely  1. Command & control centre 2. Video Management Software (VMS)	The Sole Bidder or any of Consortium members should have experience, in India, of executing projects (should have been completed or declared "Go-live" by the Client) of command and control centre/ viewing centre during the last five years as on bid submission. <ul style="list-style-type: none"> <li>No. of project (3) - 15 marks</li> <li>No. of project (2) - 12 marks</li> </ul>	15	OR  Satisfactory Client Certificate from the concerned authority on the name of bidder along-with work order mentioning the value of the work order and scope

S. No.	Criteria Category	Evaluation Criterion	Max. Marks	Supporting Documents required*
	3. ITMS.	<ul style="list-style-type: none"> <li>No. of project (1) - 08 marks</li> </ul>		of services
<b>C</b>	<b>Approach &amp; Methodology with proposed solution (Max Marks: 15)</b>			
C1	Approach & methodology	<ul style="list-style-type: none"> <li>Understanding of the scope of work as per the RFP - <b>02 marks</b></li> <li>Approach and strategy to implement this project - <b>05 marks</b></li> <li>Proposed Network Architecture to meet the functionalities as given in RFP - <b>02 marks</b></li> <li>Experience of integrating Video Surveillance systems in ICC systems - <b>03 marks</b></li> <li>Risks for the project and also propose suitable mitigation plan for each of these risks - <b>03 marks</b></li> </ul>	15	Presentation by the bidder
<b>D</b>	<b>Proof of Concept (Max Marks: 20)</b>			
D1	Proof of Concept (PoC)	<ul style="list-style-type: none"> <li>Script on PoC will be given at the time of technical bid evaluation.</li> <li>Tender committee can also make a visit at a site, where the bidder has already implemented the solution as per the scope of RFP. The visit plan will be given by the bidder.</li> </ul>	20	Presentation by the bidder

Only those bids which have a minimum technical score of 70% of total marks and minimum 40% in each section of the Technical Evaluation as given in the above Table - Technical Evaluation Marks shall be considered qualified. However, PPHC reserves the right to lower the minimum required marks if none of the bidders achieves **70%** of the total technical. The bid complied as per criteria mentioned above shall be evaluated as per the framework detailed below:

S. No.	Evaluation Criteria	Max. Marks	Minimum Qualifying Marks (for each section) 40%
1.	Bidder's Profile	20	8
2.	Project Experience	45	18
3.	Proposed solution, Approach, Methodology	15	06
4.	Proof of Concept (PoC)	20	08
	<b>Total</b>	<b>100</b>	<b>40</b>

#### 1.4 Opening of Proposal

First, the Prequalification bid will be opened and if found that the Sole / Lead Bidder meets the eligibility criteria and has furnished all the documents in the prescribed manner, then the Technical Proposal shall be opened. The timing for opening the technical bid will be at the sole discretion of PPHC. The commercial bid of the qualified bidders will be opened by the PPHC.

#### 1.5 Evaluation Criteria

The Technical/ Tender committee, constituted by PPHC will evaluate the bids i.e. Prequalification, Technical and Commercial as per the following pattern-

- a) Conditional bids shall be summarily rejected.
- b) Evaluation committee will examine the bids to determine whether they are complete, whether any computational errors have been made, and whether the bids are generally in order.
- c) Arithmetical errors will be rectified on the following basis: 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 shall prevail and the total price shall be corrected. If the Sole / Lead Bidder does not accept the correction of the errors, his bid will be rejected. If there is a discrepancy between words and figures, the amount in words will prevail.
- d) The tenderer may conduct clarification meetings with each or any Sole / Lead Bidder to discuss any matters, technical or otherwise.
- e) Further, the scope of the evaluation committee also covers taking of any decision with regard to the RFP, execution/ implementation of the project including management period.
- f) Bid document shall be evaluated as per the following steps.
  - i) **Preliminary Examination and Evaluation of Pre-qualification documents:** The Pre-qualification document will be examined and evaluated to determine whether the Sole / Lead Bidder meets the eligibility criteria, completeness of the bid, whether the documents have been properly signed and whether the bids are generally in order. Any bids found to be non-responsive for any reason or not meeting the minimum levels of the performance or eligibility criteria specified in the various sections of this RFP will be rejected and not included for further consideration.

#### 1.6 Deciding Award of Contract

- a) The Tenderer reserves the right to ask for a technical elaboration/clarification in the form of a technical presentation from the Bidder on the already submitted Technical

Proposal at any point of time before opening of the Commercial Proposal. The Bidder shall furnish the required information to the bid evaluation committee and its appointed representative on the date asked for, at no cost to the Tenderer. The Tenderer may at its discretion, visit the office / Network Operation Centre (NOC) of the Bidder for Services, any time before the issue of Letter of Award.

- b) Tenderer shall inform those Bidders whose proposals did not meet the eligibility criteria or were considered non-responsive, informing that their Commercial Proposals will be returned unopened after completing the selection process. Tendering authority shall simultaneously notify those Bidders who had qualified the Evaluation process as described in this RFP, informing the date and time set for opening of Commercial Proposals. The notification may be sent by mail or fax.
- c) The Bidder's names, the Bid Prices, the total amount of each bid, and such other details as the Tendering Authority may consider appropriate, will be announced and recorded by the Tenderer at the opening.

### **1.7 Confidentiality**

- a) As used herein, the term "Confidential Information" means any information, including information created by or for the other party, whether written or oral, which relates to internal controls, computer or data processing programs, algorithms, electronic data processing applications, routines, subroutines, techniques or systems, or information concerning the business or financial affairs and methods of operation or proposed methods of operation, accounts, transactions, proposed transactions or security procedures of either party or any of its affiliates, or any client of either party, except such information which is in the public domain at the time of its disclosure or thereafter enters the public domain other than as a result of a breach of duty on the part of the party receiving such information. It is the express intent of the parties that all the business process and methods used by the Bidder in rendering the services hereunder are the Confidential Information of the Bidder.
- b) The Bidder shall keep confidential any information related to this tender with the same degree of care as it would treat its own confidential information. The Sole / Lead Bidders shall note that the confidential information will be used only for the purposes of this tender and shall not be disclosed to any third party for any reason whatsoever.
- c) At all times during the performance of the Services, the Bidder shall abide by all applicable security rules, policies, standards, guidelines and procedures. The Bidder should note that before any of its employees or assignees is given access to the Confidential Information, each such employee and assignees shall agree to be bound by the terms of this tender and such rules, policies, standards, guidelines and procedures by its employees or agents.
- d) The Bidder should not disclose to any other party and keep confidential the terms and conditions of this Contract agreement, any amendment hereof, and any Attachment or Annexure hereof.
- e) The obligations of confidentiality under this section shall survive rejection of the contract.

**Note: The Bidder should conduct background checking for all the personnel deployed on the Mohali City Surveillance Project.**

### **1.8 Publicity**

Any publicity by the Bidder in which the name of Mohali City Surveillance and FMS is to be used, should be done only with the explicit written permission from PPHC Department.

### **1.9 Right of Selection/Rejection– Waiver of Informalities or Irregularities:**

PPHC reserves the right to reject any or all proposals, to waive any minor informalities or irregularities contained in any proposal, and to accept any proposal deemed to be in the best interest of the Department. Selection of a vendor solution shall not be construed as an award of contract, but as a commencement of contract negotiation, including but not limited to the contract price proposed.

## **2. SCOPE OF WORK:**

### **2.1 Broad scope of work**

For setting up “City Surveillance System” in Mohali Police Jurisdiction, the broad scope of work for this assignment is given as under-

- a) **High-definition IP cameras** - Supply, installation, commissioning and maintenance of high-definition IP cameras along with necessary components at specified outdoor locations, as indicated in Annexure-A;
- b) **Recognition:-** Installation and Configuration of IP based Surveillance Solution with Automatic Number Plate Recognition (ANPR), Over speeding, Red light violation, seat belt violation and seamless integration of ANPR system with Video Surveillance System.
- c) **Provision of end-to-end connectivity bandwidth**, on leasing basis, between all field locations and data centre, as per the required bandwidth. The bidder shall also provide Monitoring / Managing Software that will be required to monitor/ manage the Leased network;
- d) **Setting up Command and Control Centre** at the given location in Mohali;
- e) **Providing manpower** including Project Manager and operational staff;
- f) **Impart training on overall system** for One Month after successful commissioning for all levels.
- g) **Use of Data center, established by the Department of Governance Reform, Punjab in Sector 74, Mohali-** The required data centre, storage and backup services will be provided by the Department of Governance Reforms, Punjab from its State Data Centre (SDC), exists in Mohali, to make a complete functional IP based intelligent CCTV system. The selected bidder will give the requirement of VMs, RAM and storage for hosting software such as Video Management software and other system software to run the entire surveillance system in Mohali Police Jurisdiction.
- h) **Operating and maintaining the entire City Surveillance system on turnkey basis** for a period of Three years from the date of acceptance or of Go-Live. The term can be extendable for further 2 years subjected to satisfactory performance).
- i) **Provide technical assistance** - to integrate with Integrated Command and Control Centre (ICCC) project, being implemented as part of Smart City project by the Department of Local Government.

**Note** – i) Any addition in the number of locations shall need to be connected as per the agreed terms and conditions. Same terms and conditions shall be applicable for change or removal of any site;

- ii) After the project period, the Bidder is responsible to transfer all the hardware and software components of the project in working condition to PPHC/ Police Department

### **2.2 General requirements**

- a) The selected bidder shall perform detailed site surveys for the purpose of commissioning the field equipment at all the locations under the scope of the Project. The Supply Installation Testing and Commissioning (SITC) shall only commence after the detailed survey report is duly approved by PPHC/ Mohali Police.

- b) The selected bidder shall identify and obtain necessary No Objection Certificate (NOC), statutory clearances, approvals for erecting the poles, carry out civil work and installing cameras etc. including provisioning of the required power and network bandwidth.
- c) The selected bidder shall manage all necessary paperwork to pursue permission from respective authorities. No commercial/legal fees shall be applicable to PPHC/ Mohali Police for obtaining the necessary permissions. These shall be factored in by the selected bidder in their Commercial Bid.
- d) The selected bidder shall provide all material required for the mounting of components such as Cameras, and other field equipment (with all fitments and accessories)
- e) The selected bidder shall ensure all the equipment's installed in the outdoor locations are vandal resistant
- f) The selected bidder shall provide comprehensive insurance of field equipment for the duration of the contract
- g) The system shall transmit video feed from all cameras to the Command and Control Centre (CCC) for viewing and digital storage.
- h) The system shall provide online storage of video and images for minimum 30 days. The proposed NAS/SAN should be scalable as and when required.
- i) The system shall adhere to open standards and shall be OS agnostic, providing maximum flexibility and low cost of ownership, scalable to meet future surveillance and intelligent traffic monitoring needs, and ease of use.
- j) The bid should be inclusive of all accessories, brackets, camera poles, various types of cables, conduits, ducts etc. Specification laid down in the tender document is only indicative and not exhaustive. The Bidders may quote for additional items to implement the system completely if needed.
- k) The scope shall not be restricted to the items listed in the schedule or requirement and specifications only. Whatever additional items, components and equipment that are needed to make the complete system functional, shall be included in the BOM when bidding.
- l) The Bidder shall guarantee system uptime as mentioned in Service Level Agreement (SLA) Failure to do so shall result in penalty.
- m) The software to record and generate periodic reports/Reports-on-demand of the system health is to be delivered by the selected Bidder.
- n) If any equipment becomes faulty or damaged during the project tenure, the selected Bidder is responsible for its onsite repair/ replacement with new original components/equipment at no additional cost.

### **2.3 City Surveillance**

The Bidder shall be responsible for installation of High Definition Bullet, PTZ Camera, ANPR Camera and RLVD Camera at various sites as mentioned in Annexure-A of the RFP. PPHC may increase number of cameras and sites during the project period.

The bidder shall provide structural calculations and drawings for the approval of PPHC before commencing installation. The designs of the poles shall be approved by PPHC before installation starts and that necessary design changes incorporated after reviews. The general guidelines in this regard are given as under-

#### **Installation of Standard and Cantilever GI Poles**



- a) The bidder shall coordinate with concerned authorities/municipalities for installation of poles.
- b) Poles and cabinet shall be so designed that all elements of the field equipment shall be installed, maintained and repaired.
- c) The bidder shall be responsible for preparation of concrete foundation for Galvanized Poles & Cantilevers Poles.
- d) The bidder shall ensure that physical look of the installation area is restored to its original state after installation of poles, cantilevers etc. The placement shall be designed keeping in mind the normal flow of vehicular traffic and pedestrian movement is not disturbed
- e) The bidder will carry out supply, installation, testing and commissioning of IP Cameras, PTZ Cameras including appropriate poles & cantilevers and any supporting structures, foundations etc.
- f) The Bidder shall be responsible of installation of Arm shaped corrosion free galvanized Pole at each camera site and shall mount the Cameras (Fixed, PTZ, ANPR and RLVD) at these Poles.
- g) The bidder shall use the industry leading practices while positioning and mounting the cameras and ensure that the pole/ mast implementation is vibration resistant. Arrangements for bird scare spikes on top of cameras shall be made to prevent birds from sitting on top of camera box.
- h) The poles installed by the bidder shall have proper grounding, earthing and bonding as per relevant standards for such structures
- i) Base frames and screws shall be delivered along with poles and installed by the bidder.
- j) The bidder shall be responsible to undertake required structural analysis regarding the regulated load conditions and considering the respective wind load while installing the poles/cantilevers for IP cameras and other equipment
- k) The bidder shall follow Punjab Government rules and guidelines for the installation of poles.

#### **Outdoor Cabinets / Junction Boxes**

- a) The bidder shall ensure that each location shall be fitted with outdoor cabinets sized and dimensioned to host all equipment necessary to operate Surveillance and future Traffic management and enforcement Systems as defined in this RFP. The size of outdoor cabinet/ Junction Boxes shall be sufficient to house all the system components, which may be installed at the intersection or nearby
- b) The bidder shall ensure that boxes shall be dustproof and impermeable to splash-water. They shall be suitable for outdoor environmental conditions in S.A.S. Nagar. They shall have separate lockable doors for:
  - a. Power cabinet: This cabinet shall house the electricity meter, rectifier, battery bank and the power supply system
  - b. Control cabinet: This cabinet shall house the electronic components required for all the field components (Surveillance Cameras, ANPR Cameras, Traffic Detection and Management Systems etc.) at that location.

- c) The bidder shall ensure that internal cabinet cabling shall be designed for an easy connection and disconnection of the equipment and power, marked with identifiers and installed in proper cable guidance trays
- d) The cabinets shall be of robust construction and shall include 3-point security-locking mechanisms to prevent unauthorized access to the field equipment
- e) The bidder shall ensure that all Junction Box enclosure compartments shall be equipped with a natural convection air circulation system via provision of air circulation filters for temperature and humidity control that shall not require maintenance and shall allow free circulation of air inside the enclosures to prevent overheating as well as the build-up and effects of humidity and heat, without permitting the entry of elements that might endanger system operation
- f) The bidder shall ensure that all the hardware is placed inside the junction boxes that could withstand temperatures prevalent in Mohali City throughout the year
- g) The bidder shall ensure that heavy electrical load shall be directly powered in Junction Box without Battery Backup.
- h) The bidder shall ensure Outdoor cabinets / junction boxes are IP65 complaint at each camera site.
- i) The Bidder shall also be responsible to provide chemical earthing of this Rack at each and every location for safe and smooth functionality of the setup. The Rack shall be mounted on iron stand and this iron stand also shall be provided by the Bidder. All outdoor equipment like UPS & Battery bank, Switch, and Cables shall be kept inside the Rack.
- j) The Bidder shall be responsible for installation of PoE Switch at each camera location. All cameras will be connected with this PoE Switch through outdoor UTP (CAT6) cable which would be housed inside concealed pipe and tie.

#### **Civil and Electrical Works**

##### **Between Network Service Provider and Junction Box:**

- a) The bidder be responsible for carrying out all the civil work required for setting up all the field components.
- b) The bidder shall be responsible for preparation of Chambers with metal cover at every junction box, pole and at road crossings
- c) The bidder shall be responsible for Concrete foundation from the Ground for outdoor racks.
- d) The bidder shall place route marker as per given alignment & maintaining offset distance from road centre as per norms set by concerned government authorities.
- e) The bidder shall use barricading and signage board as per requirements of concerned Government authority pertaining to specific roads.
- f) The bidder shall coordinate with the existing utility owners before starting the excavation work. If required, the bidder shall ensure the presence of representative of existing utility owners.
- g) Once the utilities have been located, bidder shall physically identify the exact location of the utilities by taking test pits of minimum width of 2 meters across the drill path, to determine the actual location and path of any underground utilities.

Bidder shall not commence boring operations until the location of all underground utilities within the work area have been verified.

- h) The bidder shall dispose the surplus earth material to a suitable location as indicated by concerned Government authorities.
- i) The bidder shall backfill and reinstate the area to its original condition as per the guidelines issued by the concerned government authorities pertaining to specific road after completion of work.
- j) Bidder shall carry out all the electrical work required for powering all the components of the System.
- k) Electrical installation and wiring shall conform to the applicable National Electrical Code 2011.
- l) The recurring expenses towards diesel and electricity would be reimbursed to the selected bidder on actual basis on a quarterly basis.
- m) The bidder shall follow state PWD guidelines for Civil & Electrical work and repairs

**Between Junction Box and CCTV Locations:**

- a) The Bidder shall be responsible for carrying out all the civil work required for setting up all the field components.
- b) The Bidder shall be responsible for preparation of concrete foundation for Galvanized Poles & Cantilevers Poles.
- c) The Bidder shall use GI pipe along with DWC pipe for protection if depth of cable is less than 6 inches as digging is not possible up-to prescribed depth due to Utility under earth or Rocky soil.
- d) Power and Data Cable shall be laid in separate conduits / ducts and separated by minimum 6" distance.
- e) Outdoor-rated Unshielded Twisted Pair (UTP) Communications Category (CAT) 6 Cable with armoring to provide Ethernet connectivity between network switches and end devices such as CCTV located within 100 meters from the switch location.
- f) Each conductor of the UTP cable shall be insulated with a colored high-density polyethylene jacket with varying twisted length to minimize crosstalk.
- g) The termination shall protect the cable terminations from water and mechanical damage and shall be resistant to salt corrosion.
- h) The Bidder shall place route marker as per given alignment & maintaining offset distance from road centre as per norms set by concerned government authorities.
- i) The Bidder shall use barricading and signage board as per requirements of concerned city administration pertaining to specific roads.
- j) The bidder shall coordinate with the existing utility owners before starting the excavation work. If required, the bidder shall ensure the presence of representative of existing utility owners.
- k) Concreting shall be used to provide additional protection on bridges, culverts and on stretches wherever depth of excavation is less than 0.2 meter
- l) The bidder shall dispose the surplus earth material to a suitable location as indicated by concerned Government authorities
- m) The bidder shall backfill and reinstate the area to its original condition as per the guidelines issued by the concerned government authorities pertaining to specific road after completion of work.
- n) Electrical installation and wiring shall conform to the electrical codes of India

- o) Bidder shall make provisions for providing electricity to the cameras (ANPR, PTZ, and Fixed) via Junction Box, housing the power supply, with minimum backup as defined in this RFP.
- p) For the wired cameras, bidder shall provision for drawing power through PoE/POE+ (Power over Ethernet) as primary method and shall use dedicated power cable laid separately along with STP/SFTP cable only in exclusive cases, in case POE/POE+ is not possible

#### **Grounding, Earthing, Bonding and Surge Protection Measures**

- a) Bidder shall comply with the technical specifications and IS 3043: 1987 taking into account all grounding, earthing, bonding and surge protection measures for system enclosure, equipment, power and signal cabling
- b) Bidder shall describe the planned Grounding, Earthing, Bonding and Surge Protection in their technical bid
- c) Bidder shall install surge protection devices of adequate capacity for protection of all equipment
- d) Bidder shall install for all interfaces of electronic equipment high speed photoelectric isolation to reduce the damage to integrated circuit CMOS chips due to electrical surges
- e) Bidder shall install the chemical Earthing for the equipment that shall meet the related industry standards
- f) The Earthing cable shall be installed in a secure manner to prevent theft and shall be rust proof

#### **IP Camera Surveillance**

- a) Bidder shall describe in detail the design, operational and physical requirements of the proposed IP Camera Surveillance system, to demonstrate compliance with all the specified requirements in this RFP
- b) The Bidder shall install IP Camera based surveillance system
- c) The bidder shall provide end to end connectivity from all locations to State Data Centre (SDC), established by the Department of Governance Reforms, Punjab in Sector 74, Mohali
- d) The bidder shall be responsible to provide Monitoring / Managing Software which shall be required to monitor/ manage the Leased network.
- e) Bidder's solution for the City Surveillance shall also have the provisions for Integration (View, Command & Control) with Cameras and Drone Cameras installed/ commissioned during events such as Public gatherings and festivals, VIP movements etc. as and when required by PPHC/ Mohali Police,

#### **Fault Restoration Services**

- a) The Bidder shall have field maintenance team to ensure SLA adherence. The Maintenance teams shall comprise of manpower, logistics, required tools/tackles/machinery & equipment etc.
- b) The bidder shall be required to carry out maintenance activities which include identification of fault/cut on ground, obtaining permission from local authorities if required, excavation of earth to expose cable, laying of required length of cable with protection wherever required, installation of Jointing pit & back filling of pit with sand, supply and installation of cable Route Markers and Joint Markers as per specifications
- c) Bidder shall observe all national and local laws, ordinances, rules and regulations and requirements pertaining to the work and shall be responsible for extra costs arising from violations of the same

## **2.4 Intelligent Traffic Management System (ITMS) and Traffic Violation Detection System**

The Intelligent Traffic Management System (ITMS) shall enable Traffic Law Enforcement through the smart ICT led interventions to improve & regulate traffic signals allowing real time traffic density.

It shall also help the city authorities/ Traffic Police to understand the traffic patterns prevailing across the city; plan and manage events in Mohali city based on historical and real-time Traffic data.

Traffic Violation Detection System (TVDS) interventions such as Red-Light Violation Detection (RLVD), wrong way & wrong parking detection, zebra crossing/stop line violation, Overspeeding, Seat belt and Helmet violation detection shall also be the part of the ITMS component.

It is further envisaged that the TVDS system shall have provision for integration with the e-Challan System and Vaahan & Saarthi Projects of Ministry of Road Transport & Highways

### **Traffic Violation Detection System (TVDS)**

Traffic Violation Detection system (TVDS) primarily constitutes of Red Light Violation Detection System (RLVD) and Automatic Number Plate Recognition (ANPR) Systems, which shall have capability to capture the number plate of the vehicles that have crossed the stop line, at the junction, while the traffic light is red.

System shall be able to automatically detect red light through evidence camera units, RLVD camera unit along with sensor, and captures vehicle number through ANPR camera.

Further, the ANPR system processes the captured image and convert into an alphanumeric text/ number, which shall be taken into e-Challan system for the issuance of the challan.

### **Integration with eChallan and Vaahan & Saarthi**

The e-Challan system provides a simple digital process for sending challans to violators; Traffic and Parking violations shall be processed in the field with handheld

machines, while details of the traffic violations detected by using RLVD & ANPR systems shall be interfaced with the e-Challan system for sending the challan to the offenders.

The e-Challan system also provides citizens with web and mobile interface to check for pending tickets/challans and history while the payments, option to made payment against the challan online.

It is proposed to keep the relevant provisions in the system to integrate with eChallan and Vaahan & Saarthi as and when required to be implemented in future.

#### **Detailed Site Survey and Site Preparation:**

- The selected bidder shall undertake site survey of all the proposed junctions for ITMS to ascertain number of traffic sensors, detectors & controllers, RLVD & ANPR cameras and required accessories, camera positioning (viewing angle, height, direction etc.) to ensure intended coverage.
- The selected shall also closely coordinate with the Traffic Police, PPHC, Mohali Police, PWD or any other authority, and shall be responsible for supply & erection of pole infrastructure along with cantilevers for the installation of traffic sensors, lights, cameras and shall jointly decide the location of pole infrastructure, along with cantilevers, in consultation with officials assigned by the purchaser or its authorized entity.
- The selected bidder shall be responsible for provisioning of end-to-end IT Infrastructure & System Applications both at the field level, identified Traffic Junctions, as well as at the CCC.
- The indicative junctions (Within S.A.S. Nagar distt.) to be covered under this project will be provided after award of project.

## **2.5 Communication Network**

#### **General Guidelines**

- a) PPHC/ Mohali Police intends to have Leased Network Backbone with required bandwidth at each location, which can support all the planned initiatives i.e. City Surveillance, Command & Control Centre & Data Centre, etc. and scalable to accommodate future IT requirements of the city.
- b) The bidder will tie up with Punjab ISPs to plan up the last mile connectivity for providing the backbone connectivity bandwidth, on optical Fibre media, between each camera site/location and Centralized Police control room.
- c) The bidder will plan to provide dedicated OFC network from each camera site/location to Centralized Police control room.
- d) Critical network design parameters such as security, reliability, scalability, manageability, interoperability and resiliency in end-to-end service-oriented network delivery shall be considered when taking network backbone on lease across the city from existing service providers.
- e) The bidder shall arrange for the Right of Way (RoW) for any new network laying / installation of RF Towers and Radio Antennas that is to be installed. PPHC/ Mohali

Police shall help in providing RoW permissions by coordinating with concerned authorities.

- f) In case of installation of RF Towers and Radio / Antennas on any private property for Network Backbone, the bidder shall arrange RoW permissions on his own.
- g) The network architecture proposed shall comply with the SLA's, best practices and industry standards to ensure high availability, scalability, manageability and security for the information, services and solutions being managed on the network.
- h) The Bidder shall be responsible for testing of Fibre link from each camera site/location to Police control room and shall verify & insure smooth transfer of video footage from each camera site/location to Police control room.
- i) The Bidder shall be responsible for testing of Network provider's Fiber link from PoE switch at each camera site/location to L3 switch of Police control room.
- j) In case of fibre link failure at any camera site/location and/or CCC, the Bidder shall be responsible for logging of complains to Network provider. The Bidder shall also be responsible to liaison with Network provider for rectification and restoration of failed fibre link. The Bidder shall also have to maintain log book for the same.

#### **Leasing of Network**

- a) The bidder shall take services of TIER1 ISP on lease basis with sufficient capacity for the entire duration of the contract.
- b) The bidder shall provide network connectivity at all required locations.
- c) The bidder shall provide end to end connectivity from all locations to State Data Centre (SDC) with minimum two different physical paths.
- d) The bidder shall be responsible to provide Monitoring / Managing Software which shall be required to monitor/ manage the Leased network
- e) Any addition in the number of locations shall need to be connected as per the agreed terms and conditions for already connected sites. Same terms and conditions shall be applicable for change or removal of any site from earlier selected sites

#### **Fault Restoration Services**

- a) The bidder shall have field maintenance team to ensure SLA adherence. The Maintenance teams shall comprise of manpower, logistics, required tools/tackles/machinery & equipment etc.
- b) The bidder shall be required to carry out maintenance activities which include identification of fault/cut on ground, obtaining permission from local authorities if required, excavation of earth to expose cable, laying of required length of cable with protection wherever required, installation of Jointing pit & back filling of pit with sand, supply and installation of cable Route Markers and Joint Markers as per specifications
- c) Bidder shall observe all national and local laws, ordinances, rules and regulations and requirements pertaining to the work and shall be responsible for extra costs arising from violations of the same

### **2.6 Command and Control Centre (CCC)**

- a) The Bidder will be given 1000 square feet area for Control room surveillance

operators at Police Station Sohana, Sec. 79, Mohali.

- b) The Bidder has to complete the site preparation, interior, electrical, Air Conditioning, and other necessary things. (The Bidder is advised to inspect the site and access the requirements needed for establishing)
- c) The Bidder shall have to provide the civil layout diagram for placement of video walls, Workstations, etc. (including Network & Electrical diagram) inside the control room.
- d) Proper underground electrical cable should be laid with conduit & casing from UPS point to each equipment (Workstations, Video walls, Printer) inside control room including fixing of tiles on floor and distemper paint on walls.
- e) The Bidder has to design and build work stations for at-least 10 persons in the room provided to the Vendor to monitor the project in Command and Control Centre. The quality of material should be best.
- f) The Bidder shall be responsible for supply, laying & installation of electrical cable from Main DB or Transformer to UPS DB to equipment. Bidder shall also supply & install of Industrial Main DB, UPS DB with proper rated MCBs in control room.
- g) The Bidder should do structured data cabling from network rack/core switches to each and every equipment in the control room. The Bidder shall also be responsible for testing, proper tagging and certification of the networking in the control room.
- h) The Bidder is responsible for supply & installation of I/O box, Faceplate, RJ45 connector, crimping. Conduit pipe, flexible pipe and CAT6 UTP Cable.
- i) The Bidder shall be responsible to provide proper chemical earthing (with <1V between earth and neutral throughout project tenure) for UPS, Equipment, and Rack etc.

## **2.7 Data center and DR**

State Data Centre (SDC) has been established by the Department of Governance Reform, Punjab in Sector 74, Mohali

This data centre will be used by the selected bidder for hosting of VMS and other software to run the entire city surveillance system in Mohali.

The bidder will provide connectivity for all field locations, where cameras will be installed and take the aggregated bandwidth to State Data Centre (SDC) for accessing video management software and other supporting software.

The required data centre, storage and backup facilities / services will be provided by the Department of Governance Reforms, Punjab from its State Data Centre (SDC), exists in Mohali, to make a complete functional IP based intelligent CCTV system.

The selected bidder will give the requirement of VMs, and storage for hosting software such as Video Management software and other system software to run the entire surveillance system in Mohali Police Jurisdiction.

The modalities for accessing SDC will be worked jointly by PPHC, DoGR and the selected bidder. In consultation with the selected bidder, periodic backups will be done



by DoGR/ PSeGS.

Depending upon DR requirements, such services will be made by DoGR/ PSeGS for this project.

All payments on account of VM and storage services will be made directly by PPHC to DoGR/ PSeGS.

## 2.8 Provision of Manpower

- a) **Project Manager:** The Bidder shall be responsible to deploy a dedicated Project Manager with minimum 10 years' experience in similar field including surveillance and Core Networking Projects.
  - The qualification of the project Manager should be B.E. Electronics/IT/ Computer Science or MCA in first class.
- b) **FMS Staff:** The Bidder shall have to deploy 3 number of Technical manpower having experience to provide FMS support in networking related and capability to provide preventive maintenance services for different components of the Project.
- c) **Instructor:** The Bidder shall have to deploy 1 trainer/instructor for training of the designated police staff on VMS day to day operations. This resource should be available in general shift.
  - The qualification of the trainer should be BCA and have at least five years' experience in IT training.

## 2.9 Acceptance Test

The acceptance of the CCC and field equipment (camera, switch, UPS, Poles, civil work, etc.,) in accordance with the requirements in this RFP shall be conducted.

After successful testing by any party as authorized by PPHC, a Final Acceptance Test Certificate shall be issued by PPHC to the Sole / Lead Bidder. The date on which Final Acceptance certificate is issued shall be deemed to be the date of successful commissioning of Command & Control Centre (CCC) and all the field sites.

The test shall include the following:

- All Civil, electrical, UTP, etc., are completed as per the industry standard and minimum specifications.
- All hardware and software items must be installed at particular site as per the specifications.
- Availability of all the defined services shall be verified. The SI shall be required to demonstrate all the features/facilities/functionalities as mentioned in the RFP and the proposed solution.
- The SI will arrange the test equipment required for performance verification and shall also provide documented test results. (e.g. Sole/ Lead Bidder should arrange Variac at site for testing UPS I/P range and O/P variations)
- Sole/ Lead Bidder shall be required to demonstrate all the

features/facilities/functionalities as mentioned in the RFP and technical proposal.

Sole / Lead Bidder can request to initiate the acceptance test process for a lot of minimum 50 sites at a time. The final acceptance certificate will be released after acceptance of all the components of the project.

Any delay by the Sole / Lead Bidder in the Final Acceptance Testing shall render the Sole / Lead Bidder liable to the imposition of appropriate Penalties.

### 3 Project Timelines and payment schedule

S.No	Activity	Time Frame	Total Time Frame
1.	Issuance of LoI (Letter of Intent)	T0	
2.	Submission of PBG by the successful bidder	T0+ 2 Weeks = T1	14 Days
3.	Signing of an agreement with the selected bidder	T0+ 2 Weeks = T2	28 Days
4.	Site Survey (for CCC & Camera Sites/ Locations) and Submission of Report	T0+ 2 Weeks = T3	42 Days
5.	Site preparation with completion of Civil works and Non-IT Equipment commissioning	T3 + 5 Weeks = t	70 Days (3% of CAPEX value)
6.	Hardware procurement delivery at respective sites	T3 + 8 weeks = T4	91 Days (60% of CAPEX value)
7.	Completion of entire Surveillance System Commissioning	T4 + 4 Weeks = T5	120 Days (20% of CAPEX value)
8.	Acceptance Test (Go-Live)	T5 + 2 Weeks = T6	132 Days (10% of CAPEX value)
9.	Training to Police Personnel	T6 + 1 Week	139 Days (2% of CAPEX Value)
10.	Operational support and maintenance		3 Years from the date of Acceptance Certificate issued by PPHC Payment of Quarterly basis <ul style="list-style-type: none"> <li>• OPEX value</li> <li>• 5% of CPEX amount will be amortized in equal instalments over 3 years. (@ 0.416 % of CAPEX value)</li> </ul>

#### 4 Schedule of Supply:

S.No.	Name of Goods or Related Services	Unit of Measurement	Quantity
	<b>Field equipment</b>		
1.	IR IP HD PTZ Camera with all accessories	Nos.	<b>36</b>
2.	IR HD Bullet Camera with all accessories	Nos.	<b>300</b>
3.	ANPR Camera with IP 66 rated outdoor housing, external IR/WHITE light illuminator of 100 Mtrs. Range	Nos.	<b>100</b>
4.	RLVD Camera with IP66 rated outdoor housing	Nos.	<b>28</b>
5.	Manageable Layer-2 Industrial grade Switch 8 Port 10/100 PoE and 2 SFP Ports for outdoor locations	Nos.	<b>100</b>
6.	Local Processing Unit (LPU)	Nos.	<b>100</b>
7.	1KVA Online UPS for Outdoor Junction (60 minutes battery backup)	Nos.	<b>100</b>
8.	IP 55 Enclosure/Rack with Accessories	Nos.	<b>100</b>
9.	Outdoor Armed Shape Pole with erecting kit	Nos.	<b>200</b>
10.	Armed Cable	Lumpsum	<b>Lumpsum</b>
11.	6 Core Optical fibre cable (OFC)	Lumpsum	<b>Lumpsum</b>
12.	Patch Panel, Patch Cord for UTP Cabling NW	Lumpsum	<b>Lumpsum</b>
13.	Cat 6 Outdoor cable, Outdoor Conduit and Tie	Lumpsum	<b>Lumpsum</b>
14.	Media Convertors	Lumpsum	<b>Lumpsum</b>
15.	Electricity Meter with rugged enclosure	Nos.	<b>100</b>
16.	Site preparation including electrical wiring, digging, UTP, power cabling	Nos.	<b>100</b>
17.	MPLS connectivity with required bandwidth & redundancy	Nos.	<b>100</b>
	<b>Command &amp; Control Centre (CCC)</b>		
18.	Core L3 Switch in Command Centre on Active – Active mode connection	Nos.	<b>2</b>
19.	Smart Racks	Nos.	<b>2</b>
20.	Workstations- Intel Core i7 with Graphics Card	Nos.	<b>15</b>
21.	Setting up of Local Area Network (LAN) including LAN L2 switch (in HA mode)	Lumpsum	<b>1</b>
22.	Site preparation (with desk & chair) for Surveillance Control Room	Lumpsum	<b>1</b>
23.	Commercial Display with min. 55-inch display screen bezel 2/3 mm	Nos.	<b>15</b>
24.	Video Wall with Controller: Main Display (5x2)	Set	<b>1</b>

S.No.	Name of Goods or Related Services	Unit of Measurement	Quantity
25.	Video Wall with Controller: VIP Display (2x2)	Set	1
26.	62 PPM Heavy duty Printer	Nos.	1
27.	10 KVA UPS with battery backup of 60 mins	Nos.	1
28.	30 KVA DG set	Nos.	1
	<b>Software</b>		
29.	VMS Solution with Analytic features - Software support, Customization, maintenance	As per Solution requirements	1
30.	ANPR Server Software	As per Solution requirements	1
	<b>Manpower</b>		
31.	Project Manager	Nos.	1
32.	Shift Engineer	Nos.	3
33.	Instructor/Trainer for training of Police Staff for on different components of the project	Nos.	1
34.	Additional Items if any to make the Sole / Lead Bidder proposed solution completely		
	<b>Connectivity at State Data Centre (SDC)</b>		
35.	MPLS aggregated required bandwidth and redundancy	Physical Links	2
	<b>Functional Requirement</b>		
36.	ANPR/RLVD Functional Requirements		

**Note:** The above given materials & quantities are minimum. It is Sole / Lead Bidders' responsibility to provide the actual quantity and additional material if required any to make their proposed solution complete and functional with full specs.

#### 4.1 DETAILED SPECIFICATIONS:

##### 1. IR IP HD PTZ Camera with all accessories

S.No.	Name of Goods or Related Services	Technical Description, Specifications and Standards
1.	Image Sensor	Image Sensor Type 1/3" Progressive Scan CMOS, 4 Megapixel Progressive CMOS sensor or better
2.	Optical Zoom	30x
3.	Digital Zoom	16x
4.	Number of Pixels	2560 x 1440 (4MP) @60FPS
5.	Shutter WDR	Min. 120 Db or better
6.	Minimum Illumination	0.05 lux (color)/0 lux (B/W) @ F1.6 with IR
7.	Focal Length	Minimum Focal Length: 7 to 195MM or better & Auto focus Motorized Zoom Lens
8.	Max Aperture	F1.5 – F4.8
9.	Focus Mode	Manual/Auto/PTZ Trigger/Zoom Trigger
10.	White Balance	Auto/Indoor/Outdoor/ATW/Manual
11.	Exposure Mode	Manual/ Automatic
12.	Electronic Shutter	1 to 1/60,000 sec
13.	Backlight Compensation	BLC / HLC / WDR
14.	Defog	Camera should support Optical Defogging & Image Stabilizing
15.	Day/Night	Day: Auto/Colour/BW, IR 300M Inbuilt
16.	Pan Travel	360° endless
17.	Manual Pan Speed	0.1°/s ~ 200°/s
18.	Manual Tilt Speed	0.1°/s ~ 120°/s
19.	Presets	Min 260 or above
20.	Preset Speed	Pan: Up to 240°/s; Tilt: Up to 160°/s
21.	Tours	Min 2
22.	Motion Detection	On/Off
23.	Image Rotation	Yes, Automatic
24.	Audio In / Out	1/1
25.	Alarm Input / Output	1 alarm inputs and 1 output
26.	Video Analytics	Line crossing detection, Intrusion detection, Region entrance detection, Region exit detection, People Gathering, Parking, Object Moving, Object Left, Loitering, Quick Moving, Auto Tracking, Face detection, Audio detection, condition change
27.	Event	Motion Detect; Video Tamper; Audio Detect; SD card capacity warning; Network disconnection; Face detection
28.	Event Notification	Record (SD card and FTP), Relay output, Email, Preset, Tour, Pattern, Snapshot
29.	Power Source	24 V AC $\pm$ 25%, 3A and PoE+ (802.3at) class 4
30.	AC Frequency	50 Hz
31.	Construction Material	Metal, IK10 & IP66 compliant housing

S.No.	Name of Goods or Related Services	Technical Description, Specifications and Standards
32.	Operating Temperature	-20°C to 50°C
33.	Relative Humidity	Less than 90%, non-condensing
34.	Ingress Protection	IP66
35.	Video Compression	H.265/ H.264/ MJPEG
36.	Video Streaming	Primary stream 2560 x 1440 @60 FPS Second Stream: D1, CIF@ 30/25 fps Third Stream: 1080p, 720p@ 30/25 fps
37.	Video Resolution	Upto 2k resolution
38.	Audio Compression	G.711a/G.711Mu
39.	Audio Stream	Full-duplex, Simplex
40.	Interface	RJ-45, 10/100 Mbps Ethernet
41.	Supported Protocols	IPv4, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, DNS, DDNS, NTP, FTP, HTTP, SNMP etc.
42.	Security	Multiple user access levels should be available with enhanced password policy, AES 256-bit encryption, Private key encryption, IP filtering, IEEE 802.1x, TPM PK1
43.	MicroSD	Support for microSD/micro SDHC class-10 up to 256 GB
44.	MicroSD Function	Event trigger recording, Continuous and scheduled recording, Automatic recording when network fails
45.	Communication	ONVIF Profile S and G, T
46.	Regulatory	BIS, CE, FCC/UL/EN GMP CERTIFIED,NABL LAB TEST REPORT FOR 13252(Part 1):2010/ IEC 60950-1 : 2005 to be attached,IP66 Protection Test Report From Government Approved NABL Lab.

## 2. IR HD Bullet Camera with all accessories

1.	Imaging Device	1/2.8" progressive scan CMOS
2.	Maximum Resolution	1920 x 1080P@30 FPS
3.	ONVIF	Profile S, G, T
4.	Minimum Illumination	Color: 0.06 Lux @f/1.6 B/W: 0Lux @f/1.6(IR on)
5.	IR Range	30 m
6.	Day/Night Method	Mechanical ICR (ON / OFF / AUTO selectable)
7.	Signal-to-Noise Ratio	55 db minimum
8.	Auto Iris Lens Type	DC IRIS
9.	Electronic Shutter Range	Auto/Manual, 1/25~1/15000s
10.	Wide Dynamic Range	120 db
11.	Back light compensation	BLC, HLC, DeFog, AWB
12.	Digital Noise Reduction	3D - Noise Reduction (ON / OFF selectable)
13.	Privacy Zone	4 configurable windows

14.	Motion Detection	Off/ On / By Schedule
15.	Image Settings	Compression,3D digital noise reduction (ON/OFF) color, brightness, sharpness, contrast, white balance, exposure control, exposure zones, backlight compensation, fine tuning of behavior at low light, rotation, and all other Image Settings in Web UI
16.	Network	RJ-45 (10/100Base-T)
17.	Power Input	PoE/12VDC/24VAC
18.	Power Consumption	Max 21W (with IR on, motorized lens working)
19.	Local Storage	Micro SDHC Min. 2TB
20.	Alarm Input	1 in
21.	Alarm Output	1 out
22.	IR Illuminator	Required
23.	Lens	Remaining locations: 3.2-10 mm or better motorized and auto focus lens
24.	Focus	Auto Focus
25.	Video Encoding	H.265, H.264 and MJPEG (CBR and VBR)
26.	Video Streams	Mainstream: 1080P/720P (1~50/60 fps)
		Sub Stream: D1/CIF (1 ~ 25/30fps)
		Third Stream: 1080p/720P (1 ~ 25fps)
27.	Resolution	1080P(1920x1080)
		1.3M(1280× 960)
		720P (1280× 720)
		D1 (704× 576/704× 480)
		CIF (352× 288/352× 240)
28.	Supported Protocols	HTTP; HTTPS; TCP; ARP; RTSP; RTP; UDP; SMTP; FTP; DHCP; DNS; DDNS; Ipv4/v6; QoS; UpnP; NTP; 802.1x; ICMP; SNMP
29.	Audio Input	1 channel Line in
30.	Audio Output	1 channel Line out
31.	Audio Encoding	G.711a/ G.711u/ AAC
32.	Audio Streaming	Dual-Channel
33.	Unicast	20users
34.	Multicast	Unlimited users H.264
35.	Situational awareness	Viewing: Digital PTZ SD Card Error, SD Card Capacity Warning Recording: whole area, set zones of interest (ROI)
36.	Security Access	Multiple user access levels with password protection, IP filtering, HTTPS, IEEE 802.1x, AES-256 Data Encryption, Digest Authentication, TLS1.2, User Access logs, TPM, PKI
37.	Operating Temperature	-10°C~+55°C
38.	Event Action	FTP Upload, SMTP Upload, SD Card Record, SIP Phone, HTTP Notification,
39.	Operating Humidity	0% to 90%, non-condensing
40.	Ingress Protection and Impact Resistance	IP 66 & IK10 or better
41.	Regulatory	BIS, CE, FCC/UL/EN GMP CERTIFIED,NABL LAB TEST REPORT FOR 13252(Part 1):2010/ IEC 60950-1 : 2005 to be attached,IP66 Protection Test Report From Government



	Approved NABL Lab.
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### 3. ANPR Camera with IP 66 rated outdoor housing, external IR/WHITE light illuminator of 100 Mtrs. Range

1.	Imaging Device	1/2.8" progressive scan CMOS
2.	Maximum Resolution	1920 x 1080P@30 FPS
3.	ONVIF	Profile S, G, T
4.	Minimum Illumination	Color: 0.001Lux @f/1.6 B/W: 0Lux @f/1.6(IR on)
5.	IR Range	50 meters Inbuilt/ External
6.	Day/Night Method	Mechanical ICR (ON / OFF / AUTO selectable)
7.	Signal-to-Noise Ratio	55 db minimum
8.	Auto Iris Lens Type	DC IRIS
9.	Electronic Shutter Range	Auto/Manual, 1/ 25~1/15000s
10.	Dynamic Range	Min. 120 db minimum
11.	Back light compensation	BLC / HLC /WDR (min.120dB)
12.	Digital Noise Reduction	3D Noise Reduction (ON / OFF selectable)
13.	Analog video output	1
14.	Analytics	Motion Detection/Scene change (covering, defocusing)/Face detect, Line crossing, Region enter / exit, object left
15.	Privacy Zone	4 configurable windows
16.	Motion Detection	Off/ On / By Schedule
17.	Character Overlay	Character overlay with specified fields
18.	Image Settings	Compression,3D digital noise reduction (ON/OFF) color, brightness, sharpness, contrast, white balance, exposure control, backlight compensation,
19.	Network	RJ-45 (10/100Base-T)
20.	Power Input	PoE/12VDC/24VAC
21.	Power Consumption	Max 21W (with IR on, motorized lens working)
22.	Local Storage	Micro SDHC Min. 128GB
23.	Alarm Input	2 in
24.	Alarm Output	1 out
25.	IR Illuminator	60M Internal /External
26.	Lens	12-50 mm / 9-40mm
27.	Focus	Auto Focus
28.	Video Encoding	H.265, H.264 and MJPEG (CBR and VBR)
29.	Video Streams	Main Stream: 1080P/720P (1~50/60 fps)
		Sub Stream: D1/CIF (1 ~ 25/30fps)
		Third Stream: 1080p/720P (1 ~ 25fps)
30.	Resolution	1080P(1920x1080)
		1.3M(1280× 960)
		720P (1280× 720)
		D1 (704× 576/704× 480)

		CIF (352× 288/352× 240)
31.	Supported Protocols	HTTP; HTTPS; TCP; ARP; RTSP; RTP; UDP; SMTP; FTP; DHCP; DNS; DDNS; Ipv4/v6; QoS; UpnP; NTP; 802.1x; ICMP; SNMP
32.	Local recording	Snapshot, video clip on alarm
33.	Audio Input	1 channel Line in
34.	Situational awareness	Viewing: Digital SD Card Error, SD Card Capacity Warning Recording: whole area, set zones of interest (ROI)
35.	Security Access	Multiple user access levels with password protection, IP filtering, HTTPS, IEEE 802.1x, AES-256 Data Encryption, Digest Authentication, TLS1.2, User Access logs, TPM, PKI
36.	Operating Temperature	-10°C~+55°C
37.	Heater/ Fan	Yes
38.	Operating Humidity	0% to 95%, non-condensing
39.	Ingress Protection and Impact Resistance	IP 67 & IK10 or better compliant
40.	Regulatory	BIS, CE, FCC/UL/EN GMP CERTIFIED,NABL LAB TEST REPORT FOR 13252(Part 1):2010/ IEC 60950-1 : 2005 to be attached,IP66 Protection Test Report From Government Approved NABL Lab.

#### 4. RLVD Camera with IP66 rated outdoor housing

1.	Imaging Device	Four 1/2.3" 2 MP progressive CMOS
2.	Maximum Resolution	8MP (4 image sensors each of 2MP)
3.	ONVIF	Profile S, G & T
4.	Minimum Illumination (May vary depending on the lens)	0.008 lux color @ F2.1, 0 lux B/W (IR LEDs on) @ F2.1
5.	IR Range	Up to 98 ft. (30 m), depending on scene reflectance. In-built / external
6.	Day/Night Method	Auto (ICR)/Color/BW
7.	Signal-to-Noise Ratio	≥ 50 dB
8.	Electronic Shutter Range	Auto, Manual, 1/30 – 1/15,000 s
9.	LENS	Four 3.0 mm, M12, fixed lenses
10.	ANGLE OF VIEW	Horizontal: 180°; Vertical: 80°
11.	Back light compensation	BLC/HLC/WDR
12.	Digital Noise Reduction	3DNR
13.	Analytics	Face detection, Audio detection, Video tampering, Motion detection, line crossing, flow detection, crowd detection, loiterers
14.	Privacy Zone	Up to 4 configurable areas
15.	Image Settings	Compression,3D digital noise reduction (ON/OFF) color, brightness, sharpness, contrast, white balance, exposure control, backlight compensation

16.	<b>Electrical</b>	
17.	Network	RJ-45 (100/1000Base-T)
18.	Power Input	PoE+ (802.3at) Class 4, 24 VAC
19.	Power Consumption	25 W max. (IR LEDs on)
20.	Local Storage	Up to 128 GB microSDHC card, Class 10 (not included)
	<b>Mechanical</b>	
21.	Lens	Four 3.0 mm, M12, fixed lenses
	<b>Audio</b>	
22.	Audio Compression	G.711a/G.711Mu/AAC/G.726
23.	Audio Interface	Two Way
	<b>Video</b>	
24.	Video Encoding	H.265/H.264/MJPEG; Bit rate control (CBR and VBR)
25.	Video Streams	3 – Streams
26.	Frame Rate	4096×1800 / 3840×1680 / 2880×1264 at 1–25 fps
		1024×452 up to 25/30 fps
		1920×832 / 1280×560 up to 25/30 fps
27.	Supported Protocols	Ipv4/v6, TCP/IP, UDP, RTP, RTSP, RTCP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, IGMP, SNMP, DNS, DDNS, IEEE 802.1x, QoS, NTP, ONVIF
28.	Supported browser	Internet Explorer® (11.0+), Firefox, Chrome
29.	Snapshot	Full resolution snapshot
30.	Local recording	Snapshot, video clip on alarm, video loop
	<b>User</b>	
31.	Unicast	20users
32.	Multicast	Unlimited users H.265,H.264
33.	Security Access	User account and password protection HTTPS, IP Filter, IEEE 802.1x, Digest authentication, User access log, TLS1.2, AES-256, FTP disabled, PCI-DSS compliance, Hardware chipset for private key, TPM
	<b>Environmental</b>	
34.	Operating Temperature	-20°C to 55°C
35.	Operating Humidity	Less than 90%, non-condensing
36.	Housing (Integrated or External)	IP 67 & IK10 or better with housing
37.	<b>Regulatory</b>	BIS, CE, FCC/UL/EN GMP CERTIFIED,NABL LAB TEST REPORT FOR 13252(Part 1):2010/ IEC 60950-1 : 2005 to be attached,IP66 Protection Test Report From Government Approved NABL Lab.

## 5. Industrial grade Field Layer-2 FE/GE 8 port POE Switch

S. No.	Parameter/ requirement	Minimum Specifications/requirements
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S. No.	Parameter/requirement	Minimum Specifications/requirements
1.	<b>Genera</b>	The switch should provide Minimum 8 Ports of 10/100/1000 Mbps GE ports and 2/4 GE SFP uplinks Ports. Should be proposed with ruggedized transceivers as per solution. The switch shall be DC powered. Should support minimum 20 Gbps or more, full duplex wire rate switching throughput
2.	<b>Layer 2</b>	802.1Q VLAN on all ports with support for minimum 256 active VLANs or higher
3.	<b>PoE</b>	Switch should have minimum 200 W PoE power available or extra power injector should be provided in the junction box
4.	<b>Layer 2</b>	Spanning Tree Protocol as per IEEE 802.1d, 802.1s and 802.1w
5.	<b>Layer 2</b>	Should support Improved resiliency with the support ITU-T standard for ring topology which should provide 50ms ring convergence
6.	<b>General</b>	Switch should support non-blocking throughput and IPv4 & IPv6 routes
7.	<b>L2</b>	Switch should support classification and scheduling as per IEEE 802.1P
8.	<b>QoS</b>	Switch should support strict priority queuing or Policing or equivalent to guarantee that the highest-priority packets are serviced ahead of all other traffic.
9.	<b>Certification</b>	RoHS Compliant, IEEE 802.3af, 802.3at, NTP
10.	<b>Environmental</b>	Operating Temperature - 10C to +65C with fan less design
11.	<b>Environmental</b>	Relative Humidity of 5% or 95% Non-condensing
12.	<b>Certification</b>	Switch should be EN 61000-4-2 Electrostatic Discharge, EN 61000-4-5 Surge, EN 61000-4-8 Power Frequency Magnetic Field, EN61000-4-6 for Conducted susceptibility
13.	<b>Certification</b>	Must support FCC 47 CFR Part 15 Class A/ FCC Part 15B, Class A
14.	<b>Standard</b>	EN 55022
15.	<b>Standard</b>	Protection Class -minimum IP 30, NEMA-TS2
16.	<b>PoE</b>	The switch shall support per-Port PoE configuration

## 5 Online UPS 1 KVA with 1-hour Battery Back-up

S. No.	Parameter/requirement	Minimum specifications/requirements
1.	Input Voltage Range	160 - 300 V at 100%
2.	Frequency (default: sync range)	50 HZ
3.	Protection	Inbuilt Short Circuit, Over/ Under Voltage
4.	Surge Protection	Class C type (IEC 61643-1, UL 94-0) / Latest Class B type
5.	Power Factor	> 0.9 at 50% load
6.	System Total (AC+DC)	Usable Capacity - 900 W

S. No.	Parameter/requirement	Minimum specifications/requirements
	Usable Capacity	
7.	Minimum DC Capacity	As per site requirement
8.	Minimum AC Capacity	As per site requirement
9.	Nominal System Output Voltage	220V AC/ Sine Wave
10.	Frequency	50Hz +- 5%
11.	Overload Protection	Yes
12.	THD/THDV	<=5% on linear load condition
13.	Protection	Short Circuit, Over Temperature
14.	Crest Factor	3:1 (Peak to Average power ration)
15.	Efficiency	89%, preferably double conversion mode
16.	Output Ports	As per site requirement
17.	Controls and Monitoring	Embedded Controller with LCD display
18.	User interface	<ul style="list-style-type: none"> <li>• LEDs for local visual alarming (Major, Minor, Power ON)</li> <li>• Ethernet for remote or local monitoring and control via Web browser</li> <li>• SNMP V2 &amp; V.3.0 protocol</li> </ul>
19.	Operating temperature	0 to +45 °C
20.	Battery Technology	Support VRLA/SMF / Lithium Ion phosphate with Battery Management Technology to protect the battery from overcharge condition
21.	Remote Management	Monitoring battery alarms, energy consumption, On/Off connected loads and parameters
22.	Battery Backup	1 hour (60 minutes)

## 6 IP 55 Enclosure/Rack with Accessories

- Should be IP 55 Rated Floor Mount and Vandal Proof Design Device.
- Should be constructed based on nine fold CRCA metal profile with a front sheet steel door with 3point locking system to ensure the security of the cabinet. Side and wall panels should be double wall constructed with fixed bolts internal to the cabinet.
- Should have integrated Splice tray to manage the different Security device connectivity and cable manager.
- Base/ Plinth including two screw-fastened gland plates for cable entry will be inherent in the overall cabinet design.
- Cabinet should have minimum 2 fans with Front door have Air inlet.
- Painting: Electro-phonetic dip coat priming to 20 Microns and then powder coated to RAL 7035 textured pure polyester (PP) to 80 to 120 Microns.
- Sole / Lead Bidder has to provide suitable size metallic Junction box for all the sites (where cameras will be installed) for UPS , battery switch and any other peripherals for operations of cameras.
- All the in & out cables must be concealed and laid underground as applicable.

- i. Should be ROHS compliant.

## **7 SM 6 Core Indoor : Unitube, Gel filled cable**

- a. Core, Single Mode, Indoor Unitube, Gel filled Cable
- b. Attenuation: @1310nm- 0.45db/KM; @1500nm - 0.4 dB/KM
- c. Tensile rating: 1200N
- d. Maximum Crush resistance: 3000N
- e. Operating Temperature: -40 Degree C to +60 Degree C

## **8 Patch Panel, Patch Cord for UTP Cabling NW**

- a. PCB based, Unshielded Twisted Pair, TIA / EIA 568-B.2
- b. Ports: 24.
- c. Port arrangement: Modules of 6-ports each, arranged 1port x 6.
- d. Category: Category 6.
- e. Circuit Identification Scheme Icons on each of 24-ports
- f. Port Identification 9mm or 12mm Labels on each of 24-ports (to be included in supply)
- g. Height: 1 U.
- h. Modular Jack: 750 mating cycles
- i. Wire terminal (110 block): 200 termination cycles.
- j. Accessories: Strain relief and bend limiting boot for cable
- k. Materials: Housing Poly phenylene oxide, 94V-0 rated.
- l. Wiring blocks: Polycarbonate, 94V-0 rated
- m. Jack contacts: Phosphorous bronze, plated with 1.27micro-meter thick gold
- n. Panel: Black, powder coated steel.
- o. Up gradable to intelligent System: Panel Should be up gradable to intelligent system without changing the panel using Retrofit Solution
- p. Performance Characteristics to be provided along with bid Attenuation, NEXT, PS NEXT, FEXT and Return Loss

## **9 Cat-6 Outdoor Cable, Outdoor conduit and Tie**

- a. Applicable Standard: Outdoor Purpose with HDPE Outer Jacket with Steel Tape for ruggedized purpose
- b. Cable Shielding: Cat 6 Cable should be protected by Steel Tape Armour and shall be use for direct burial application.
- c. All cables at field locations/signal points must be concealed (i.e. inside the pole or underground laying shall be done by SI).
- d. Should have Double HDPE Sheath for Higher strength.
- e. Bend Radius: <1" around 24 mm.
- f. Application: Direct burial & anti rodent cable for Outdoor Camera Installation.
- g. Type: Hot dip galvanized after fabrication with silver coating of 86 micron.
- h. Height: 6 meters or higher, as per requirements for different types of cameras & site conditions.
- i. Diameter: Minimum 100mm diameter pole.

- j. (Sole / Lead Bidders to choose larger diameter for higher height).
- k. Bottom base plate: minimum base plate of size: 300mm x 300mm x 15mm.
- l. Foundation: Casting of civil foundation with foundation bolts (J Bolt), to ensure vibration free erection (basic aim is to ensure that video feed quality is not impacted due to winds in different climatic conditions and also from vibration caused due to heavy vehicles on road).
- m. Successful Sole / Lead Bidder is to take prior approval from Punjab police for foundation drawing.
- n. Supply and fixing of 40mm dia, 2/3mtrs long single arm bracket with suitable pole sleeves suitable for fixing of cameras including S /F of suitable nuts, bolts, washers etc. as required for camera installation.
- o. Protection: Lightning arrestors with proper grounding.
- p. Sign-Board and Number Plate.
- q. The length / design / cantilever of the Pole will be as per location and site requirement

## 10 Core L3 Switch for Command Centre on Active –Active mode connection

S. No.	Parameter/ requirement	Minimum Specifications/requirements
1.	<b>General</b>	Switch Should have 12 numbers of 10GSFP+ ports or higher populated with multi-mode modules
2.	<b>General</b>	Should have Internal Redundant Power supply
3.	<b>General</b>	Switch should be based on a Modular OS Architecture
4.	<b>General</b>	Switch should have USB for OS Management (uploading, downloading & booting of OS and Configuration).
5.	<b>General</b>	Switch should have Multicore CPU Architecture.
6.	<b>General</b>	Should have at least 2GB of Flash for storing OS and other Logs and 2GB DRAM
7.	<b>General</b>	Switch should have Front to Back Airflow system and 3 number of field replaceable FAN's. In case of failure of one fan then other fans should automatically speed-up
8.	<b>General</b>	Switch should have power savings mechanism wherein it should reduce the power consumption on ports not being used.
9.	<b>General</b>	Switch should be Rack Mountable and should not take space more than 1RU
10.	<b>Performance</b>	Forwarding rate – 210 Mbps at least
11.	<b>Performance</b>	Configurable at least 32000 MAC addresses
12.	<b>Performance</b>	Should support at least 12K Ipv4 Routes
13.	<b>Stacking/virtual chassis</b>	Switch should have dedicated stacking port/uplink ports and should support at least 8 number of switches in a single stack
14.	<b>Stacking/virtual chassis</b>	The Switch stack should be based on Distributed forwarding Architecture, where in each stack member forwards its own information on network.
15.	<b>Stacking/virtual chassis</b>	The Switch stacking should support 320 Gbps of throughput.
16.	<b>Stacking/virtual chassis</b>	The Switch stacking should support automatic upgrade when master switch receives a new software version.
17.	<b>Layer 3</b>	The Switch should support routing protocols such OSPF, BGPv4, IS-ISv4
18.	<b>Layer 3</b>	The Switch should support IP Multicast routing protocol i.e. PIM, PIM Sparse

S. No.	Parameter/ requirement	Minimum Specifications/requirements
		Mode/PIM Dense Mode/ PIM Sparse-dense Mode & Source-Specific Multicast / IGMPv3
19.	Layer 3	The Switch should have basic IP Unicast routing protocols (static, RIPv1/ RIPv2) and VRRP
20.	Layer 3	The Switch should have IPv6& IPv4 Policy Based Routing (PBR) and Inter VLAN Routing
21.	Layer 2	The Switch should be able to discover (on both IPv4 & IPv6 Network) the neighbouring device giving the details about the platform, IP Address, Link connected through etc. thus helping in troubleshooting connectivity problems.
22.	Layer 2	The Switch should support centralized VLAN Management, VLANs created on the core switch should be propagated automatically.
23.	Layer 2	The Switch should support 802.3ad (LACP) to combine multiple network links for increasing throughput and providing redundancy.
24.	Network Security	The Switch should have Port security to secure the access to an access or trunk port based on MAC address to limit the number of learned MAC addresses to deny MAC address flooding.
25.	Network Security	The Switch should support Dynamic ARP inspection (DAI) to ensure user integrity by preventing malicious users from exploiting the insecure nature of ARP.
26.	Network Security	The Switch should support IP source guard to prevent a malicious user from spoofing or taking over another user's IP address by creating a binding table between the client's IP and MAC address, port, and VLAN.
27.	Network Security	The Switch should support flexible & multiple authentication mechanism, including 802.1X, MAC authentication bypass /equivalent, and web authentication using a single, consistent configuration.
28.	Network Security	The Switch should support Private VLANs to restrict traffic between hosts in a common segment by segregating traffic at Layer 2, turning a broadcast segment into a no broadcast multi-access like segment to provide security & isolation between switch ports, which helps ensure that users cannot snoop on other users' traffic.
29.	Network Security	The Switch should support IPv6 RA Guard, DHCPv6 guard, IPv6 Snooping to prevent any Man-in-middle attack.
30.	Operational	The Switch should support dynamic port and session configuration management.
31.	Quality of Service	The Switch should support IP SLA or equivalent feature set to verify services guarantee based on business-critical IP Applications.
32.	Operational	The Switch should support Auto QoS for certain device types and enable egress queue configurations.
33.	Operational	The Switch should support Rate limiting based on source and destination IP address, source and destination MAC address, Layer 4 TCP/UDP information, or any combination of these fields, using QoS ACLs (IP ACLs or MAC ACLs), class maps, and policy maps.
34.	Application visibility	The Switch should support Sflows/ NetFlow/Jflow/ equivalent per switch



## 11 Smart Rack

S. No.	Minimum specifications/requirements
<b>1</b>	<b>Requirements</b>
1.1	Smart Integrated Infrastructure/Smart Racks with in-built hot and cold aisle containment of racks
1.2	Intelligent Integrated Infrastructure essentially should include internal redundant or backup power supplies, environmental controls (Precision Air-conditioning, Fire suppression, smoke detection, water leak detection and humidity sensors). Critical systems like UPS and Precision Air-conditioning systems should have N+N topology
<b>2</b>	<b>Smart Integrated Infrastructure/Smart Racks shall have following components</b>
2.1	<b>In-Row closed loop Air-Conditioning</b>
2.1.1	Data center server and network racks should be equipped with In-row variable scroll cooling units to provide closed loop precision cooling system which should be able to cool the equipment's uniformly
2.1.2	Each Precision Air Cooling should be N+N topology with following features: <ul style="list-style-type: none"> <li>· Cooling System should be variable type in N+1 Topology</li> <li>· Inbuilt Heater and Humidifier</li> <li>· Outdoor Unit</li> </ul>
2.2	<b>Power Distribution</b>
2.2.1	Intelligent Rack PDU (Vertical): 02 Nos. for each Rack (each rack is having two PDUs)
2.3	<b>Main Electrical Panel and Cabling</b>
2.3.1	DB panel should be mounted on to utility rack/room wall with all internal cabling integrated into the same. Essential MCB/MCCB should be provided with electrical system. All the PDUs inside all racks should be connected by the UPS. DB panel mounted on Utility rack shall be covered with NOVEC 1230 Gas based fire suppression system
2.4	<b>Fire Detection and Suppression</b>
2.4.1	Fire detection and suppression system: Fire detection and suppression system should be mounted in panel adjacent to Smart Racks to avoid consumption of any usable U space an In-rack built-in feature of solution. It should have Fire alarm and fire suppression unit and the fire suppression agent should be NOVEC 1230 Gas
2.5	Blanking Panel: 70%
<b>2.6</b>	<b>Environmental Controls</b>
2.6.1	Each set of intelligent rack should include basic environmental controls: <ul style="list-style-type: none"> <li>· Smoke Detector</li> <li>· Water Leak Detection system</li> </ul>

	<ul style="list-style-type: none"> <li>· Temperature/ Humidity Sensor</li> <li>· Door Sensor</li> <li>· Alarm beacon</li> </ul>
2.6.2	VESDA for the Smart Racks for early detection of the fire incident
<b>2.7</b>	<b>Racks</b>
2.7.1	42 U racks of dimension 600 mm x 1000 mm: as per city BoQ
2.7.2	These rack enclosures should have both integrated cold aisle & hot aisle containment of minimum 300mm each for proper airflow
<b>2.8</b>	<b>Monitoring</b>
2.8.1	Each set of Integrated racks should have IP based monitoring facility of all the passive parameters inside racks.
2.8.2	Capable for Email Alerts
2.8.3	Monitoring unit should not occupy more than 1U space
<b>2.9</b>	<b>Other features:</b>
2.9.1	The Smart Racks shall provide much functionality and some of the key functionalities: both Cold aisle & hot aisle containment should be of minimum 300 mm each for airflow, Airtight thermally insulated cabinet, remote management
2.9.2	Shall have provision to add an extra rack in future. It should be flexible, adaptable, controllable infrastructure
2.9.3	Rack based Biometric access control system shall be provided and controlled by access control panel with access control for both front as well as rear doors
2.9.4	Critical Component's for Smart Racks (Racks, rack PDU, Cooling, UPS and monitoring system) should be from same & single OEM for seamless integration
2.9.5	IP based access control with user exclusive authentication
2.9.6	Monitoring SNMP enablement feature to connect to any 3rd party BMS over SNMP
2.9.7	HMI - Graphical User Interface for Smart Racks monitoring
2.9.8	Electrical Distribution board within Utility Cabinet to have fire detection & Novec Based Fire Suppression system
2.9.9	Status based LED Lights
<b>2.1</b>	<b>UPS:</b>
2.10.1	UPS system should be Online based UPS with >=92% efficiency in N+N redundancy configuration with battery back-up as per RFP with lithium-ion/SMF/VRLA batteries
2.10.2	Other commonly required features of UPS system are as follows:
2.10.3	The UPS should be 19" Rack mountable and should not consume more than 2U per UPS or higher
2.10.4	True On-line UPS with input range as Input Standard voltage, 380/400/415 V 3 Phase, 3 or 4 wire, +10 %, -5%
2.10.5	Input Frequency, 50 Hz, +5% or -5%

2.10.6	Output Frequency, 50 Hz, +0.25Hz to 0.5Hz
2.10.7	Noise (dB): < 60dB
2.10.8	System Efficiency at Full Load: >=92%
2.10.9	Protection Level: IP 20
2.10.10	Electromagnetic Compatibility: IEC/EN62040-1-2, IEC/EN61000-3-11, IEC/EN61000-3-12, YD/T1095-2008 and Safety: IEC/EN62040-1-1
2.10.11	Output voltage distortion: <2% total harmonic distortion (THD) for 100% linear loads; <5% THD for 100% non-linear loads

## **12 62 PPM Heavy Duty Printer**

- a. Print speed: Up to 62 PPM
- b. Print quality: Up to 1200 x 1200 dpi
- c. Duty cycle: Up to 2,00,000 pages (monthly, A4)
- d. Print technology: Laser
- e. Connectivity: 1 Hi-Speed USB 2.0, 1 Gigabit Ethernet.
- f. Memory 512 MB
- g. Paper handling input: 100-sheet multipurpose tray 1; 500-sheet input tray 2.
- h. Paper handling output: 500-sheet output bin; 100-sheet rear output bin

## **13 Work Station Intel Core i7with Graphics Card**

- a. Processor: Equivalent or better of Intel i7 E6300 – 3.10GHz, 8-MB Cache.
- b. Memory: 4GB DDR3 @ 1333MHz.
- c. Hard Disk: 500 GB SATA
- d. Display: 24" display
- e. Graphic Card : 4GB
- f. Network: Integrated 10/100/1000 Mbps Ethernet
- g. OS: Pre installed linux/ Microsoft Windows 7/8/10 pro as per requirement to run VMS (must have OE support for next 7 years) with Restore/ Recovery s/w ,OS CD and documentation CD with each PC (in absence of OS CD, OEM pack of OS to be supplied), Integrated (on board) High Definition Audio controller with internal speaker  
Others: Min 52x SATA CD ROM (OEM make)

## **14 Commercial Display with min. 55 inch display screen**

- a. Diagonal Size: 55".
- b. Light Source: LED
- c. Resolution: 1920x1080
- d. Display Colours: 8 bit - 16.7M
- e. Input Terminals: 1x Digital DVI-I (include Analog RGB), 1xDigital HDMI, 1x BNC CVBS video, 1xRS232C Dsub-9, 1x RS422 RJ45, 1x Ethernet RJ45
- f. Output Terminals: 1x Digital DVI-D, 1xRS422, RJ-45
- g. Power Supply: AC 100 - 240 V, 50Hz.
- h. All accessories including cables and wall mount kit

## 15 Video Wall with controller: Main Display (5x2)

### Video Wall:

- a. Cubes of 72" in a 5x2 configuration complete with covered base stand.
- b. 1920 x 1200 native resolution.
- c. IP based control to be provided and IR remote control also should be provided for quick access.
- d. Screen to Screen Gap shall be  $\leq 2$  mm.
- e. Screen should have an anti-reflective glass backing to prevent bulging.
- f. Control BD Input terminal:
  - 1) Input: Digital DVI, HDMI, Analog RGBHV or YPbPr, and Analog Dsub-15
  - 2) Output: Digital DVI
- g. Video wall should be equipped with a cube control & monitoring system.
- h. System should have web browser architecture.
- i. Should be able to control & monitor individual cube, multiple cubes and multiple video walls.
- j. Provide video wall status including Source, light source, temperature, fan and power information.
- k. Should provide a virtual remote on the screen to control the video wall.
- l. Input sources can be scheduled in "daily", "periodically" or "sequentially" mode per user convenience.
- m. System should have a quick monitor area to access critical functions of the video wall.
- n. User should be able to add or delete critical functions from quick monitor area.
- o. Automatically launch alerts, warnings, error popup windows in case there is an error in the system.
- p. Automatically notify the error to the administrator or user through a pop up window.
- q. Should be able to provide an error message in three sections:
  - a) Problem area.
  - b) Error Module Location.
  - c) Error Module Image
- r. Status log file should be downloadable in CSV format as per user convenience
- s. Power: 100-240V @ 50/60 Hz
- t. **Display Controller:**
  - 1) Controller to control 14 displays with 14 outputs, 4 Universal input and 8 Video in along with necessary software's
  - 2) Shall display multiple source windows in any size, anywhere on the wall
  - 3) 19" industrial Rack mount with Lockable front door to protect drives
  - 4) Embedded Dual-port Gigabit Ethernet
  - 5) Power: 100-240V @ 50/60 Hz
- u. **Wall Management Software:**
  - 1) Software should enable the user to display multiple sources in any size and anywhere on the display wall.
  - 2) It should support for auto source detection
  - 3) Should support for Video, RGB, DVI, Desktop Application and Remote Desktop Monitoring Layouts
  - 4) Should able to Save and Load desktop layouts from Local or remote machines

- 5) All the Layouts should be scheduled as per user convenience
- 6) Should support auto launch of Layouts according to specified time or event by user and shall support layout preview option
- 7) Software should provide live preview of video wall
- 8) Work space allocation: System should provide functionality to the administrator to define and allocate work space for a particular operator or a group of operators when working on a Video wall.
- 9) System should support SNTP function

## 16 2.5 Tr Comfort AC

- a. Capacity: minimum 2.5 Tons
- b. Cooling Capacity: minimum 30000 BTU / Hr
- c. Noise Level: < 50 dB
- d. Operation: Remote Control
- e. Power: 230VAC , 50Hz
- f. Make: Daikin/ Carrier/ Hitachi/ Mitsubishi/Voltas
- g. This item is inclusive of Cables, Refrigerant pipes, drain pipes, MS Stand or any other item if required to make the same operational.

## 17 Video Management System

S. No.	Parameter/requirement	Minimum specifications/requirements
1.	General	Video Management Server: Video Management System Servers shall maintain coherent operations between all servers and workstations. It shall host Management Server/s, Media / Recorder Server/s and Database Server/s.
2.	General	Video Recorder Server: The Video Recorder Server shall be a dedicated server that shall store and process video with the help of Video Management System.
3.	General	Video Analytics Server: Video Analytics Software shall be installed in the Video Analytics Server, to analyse live video in real-time to detect, identify, and track location, objects and people of interest. It shall automatically issue alerts to the appropriate personnel and initiate appropriate follow-up action according to predefined rules. This software shall also manage sensors; each sensor shall monitor a single video feed for security events. The video feeds shall be connected over the network to the Video Analytics Server. Sensors on the Video Analytics Server shall perform all event detection functions. Analytics shall also include ANPR and Face Recognition systems at the ICC.
4.	General	Web Server(s) and Thick Clients: The system shall support Thick Client and Web Client to access the system.
5.	General	The VMS architecture should comprise of centralised or decentralised architecture. The VMS should have system components such as Management Server to manage the system, Recorder or Media Server to stream and store the video feeds from the cameras and Database Server to store metadata information.
6.	General	The VMS should support single site or multi-site deployment scenarios. The VMS should have capability to aggregate videos from multiple sites to the central site for recording or monitoring. The VMS should also have the

S. No.	Parameter/requirement	Minimum specifications/requirements
		capability to aggregate the system alerts such as video analytics, user created alerts and system health alerts to the central site.
7.	General	The VMS should support single or multiple recorder server deployments. The proposed VMS should support unlimited IP and Analog cameras by augmenting the computing and storage hardware. The proposed VMS should support unlimited number of VMS clients.
8.	General	The VMS architecture should support automatic assignment of the available cameras on the network to the available Recorder Servers based on the recorder server's resources such as number of cores, available RAM and resource utilisation.
9.	General	VMS should be open to any IP and Analog cameras integration.
10.	General	The VMS should be computing hardware agnostic and should work on commercially off the Shelf (COTS) servers and storage solutions.
11.	General	The VMS should support virtual computing environment and should support all the industry leading virtualisation platforms available for Windows, Linux or Unix environment.
12.	General	The VMS should support 64-bit architecture OS and hardware environments.
13.	General	VMS shall store the system's configuration in a relational database, either on the management server computer or on the network.
14.	General	The VMS should support redundancy at each level to avoid single point of failure. The redundancy should be built into the platform and should offer failover support for Management Servers, Media / Recording Servers, Database Servers and Storage Medium.
15.	General	VMS should support Failover against temporary disconnection of DBMS Service, without any loss of camera video. As soon as the DBMS service resumes, all data should automatically be synchronised to the Database.
16.	General	Each media / recorder server should have its own storage configuration. It should be possible to select storage location/s out of all available storage locations (including Local, DAS, NAS, and SAN storage) for each media server. The media server should support load balancing and fail-safe operation by distributing the video data on all selected storage locations. So, in case of failure of any storage location, the entire video data is not lost.
17.	General	The surveillance system shall provide a scalable and reliable platform to enable customized, network-based surveillance applications.
18.	General	The VMS should support mix of storage technologies such as local / DAS / SAN / NAS storage. Each media server should support such storage locations simultaneously. RAID 6 shall be implemented on the Primary Video Recording Storage.
19.	General	In case of the failure of the Recording Server, the VMS should automatically assign the cameras on the failed recording server to other operational/redundant recording servers on the network. Manual intervention of any kind should not be required in such a case. When the failed server becomes active again, the cameras should be automatically allocated to the recorder server again without manual intervention.
20.	General	The Media Server should allow recording of camera feeds on network storage.

S. No.	Parameter/requirement	Minimum specifications/requirements
		In case the network storage fails, the recording server should start recording on the local storage. The local recording should get synchronised with the network storage as and when it is available again.
21.	General	The system shall provide for integration with other software applications through an open and published Application Programming Interface (API). Such applications shall include, but not be limited to, access control, video analytics, incident management system and other alarm and sensor inputs. It shall be possible to integrate VMS into the Command & Control system.
22.	General	VMS shall be open to any video wall system integration.
23.	General	VMS should have Open Interface to send Analytics event alerts and other Maintenance Alerts (e.g. Camera disconnection, Storage Full, DBMS disconnection, etc.) over HTTP/HTTPS protocol to any external application running in a different machine in the same LAN. This is required for integration with command & control software or any other 3rd party incident management system.
24.	General	This shall allow operations managers and system integrator to build customized video surveillance networks that meet the city requirements. VMS shall be a scalable and flexible video management system which should support unlimited cameras by adding licenses and augmenting the computing and storage infrastructure. The VMS should not have any cap on the number of client workstations.
25.	General	VMS Server Management systems should support network time protocol (NTP) on server, which automatically sets the server time and date.
26.	General	The Video Surveillance System should support high availability (HA) architecture.
27.	General	VMS should support H.265+, H.265, H.264 and MJPEG stream for both live view and Recording independently. Compression rate should be manageable.
28.	General	The VMS should have ONVIF Profile S & G compliance.
29.	General	The VMS should be able to stream standard H.265+/H.265/H.264/Mpeg4 camera video streams to any external software on demand basis.
30.	General	VMS video feeds shall be either directly encrypted or carried through encrypted tunnel using VPN or HTTPS (TLS 1.2) with FIPS 140-2 Approved Security Functions with end to end encryption technology from cameras to video recording servers.
31.	General	The VMS should support ONVIF Profile G. The VMS should intelligently synchronise the edge recording on the camera with the central recording in case the camera loses the network connection.
32.	General	Archive retention period should be configurable on per camera basis. The system should allow both retention based as well as First In First Out (FIFO) based deletion policy.
33.	General	The VMS should support multiple directory access protocols such as Microsoft Active Directory or Lightweight Directory Access Protocol (LDAP).
34.	General	VMS should integrate with multiple mapping platforms such as Open Street Maps and Google Maps.
35.	General	VMS should allow managing clusters of cameras. Quantity of cameras per

S. No.	Parameter/requirement	Minimum specifications/requirements
		cluster should be unlimited. VMS should allow assigning each camera to one or several clusters simultaneously.
36.	General	The Client Viewer should support real-time simultaneous view of 1, 2x2, 3x3, 4x4, 1+5, 1+7, 1+11, 8x8 multi-screens video display and a simple click should allow enlarging any of the multi-screen displays into a full screen display. On clicking again on the enlarged display, multi-screen display should reappear.
37.	General	VMS should select the appropriate video stream from camera for display depending on the display resolution to optimize the network bandwidth.
38.	General	The Client Viewer should support the use of standard PTZ controller or 3-axis USB joysticks for control of pan, tilt, zoom and auxiliary camera functions.
39.	General	VMS should provide options for export format type (AVI/JPEG), timestamp, frame rate (full/half), digital zoom export, and AVI CODEC. Video clip may be exported to desktop/CD/DVD or a specific file path. All audio associated with the video being exported should automatically be included in the AVI export.
40.	General	VMS should watermark every frame of the Video files with watermarks to authenticate the source of the video. While exporting video segments to external media (CD/DVD) or to any folder in workstations, the VMS should allow encryption of the video files.
41.	General	The VMS desktop client should show vital system parameters for components such as Database Server, Media Servers, Local Workstation and Storage System (all available storages). The client should show the parameters such as CPU Core Usage, RAM Utilisation and Storage Utilisation.
42.	General	The VMS should have reports such as camera uptime availability, camera recording percentage, recording status, critical events, incident video, etc.
43.	General	The System health status like Server failure, Camera Disconnection, Storage Full Indication, etc. should always be displayed within the client workstation GUI all the time.
44.	General	VMS should maintain a continuous log of Server Status Messages, Camera Connectivity, Storage Status, Recording ON/OFF, User Activity Logs, etc. which should be accessed from the workstations using different filters.
45.	General	The system should give full audit trail of the user activities in the system.
46.	General	The VMS should allow the user to bookmark any recorded video for ready reference at any later point of time.
47.	General	The system should allow the user to tag critical Event clips so that they do not get removed from the storage based on FIFO/Retention period settings.
48.	General	The VMS should allow multi-monitor support for the client workstation.
49.	General	The VMS should allow the captured image to be tempered proof for all legal and regulatory perspective with .GBF format compliant
50.	General	The VMS provider should provide an SDK (Software development kit) for customization on the software for future requirement.

## 18 ANPR Server Software



S. No.	Parameter/ requirement	Minimum specifications/requirements
1.	Vehicle Detection and Video Capture Module	<ul style="list-style-type: none"> <li>The System should automatically detect a vehicle in the camera view using video detection and activate license plate recognition.</li> <li>The System should automatically detect the license plate in the captured video feed in real-time.</li> <li>The system should perform Optical Character Recognition (OCR) of the license plate characters.</li> <li>The System should store JPEG image of vehicle and license plate and enter the license plate number into database management system like MSSQL, MySQL, and PostgreSQL etc. along with date timestamp and site location details.</li> <li>System should be able to detect and recognize the English alpha numeric license plate in standard fonts and formats for classes of vehicles such as cars, HCV, and LCV.</li> <li>The system should be robust to variation in License Plates in terms of font, size, contrast and colour and should work with good accuracy</li> </ul>
2.	Vehicle Detection by Colour	<ul style="list-style-type: none"> <li>The system should detect the colour of all vehicles on best effort basis, in the camera view during daytime and label them as per the predefined list of configured system colours. The system should store the colour information of each vehicle along with the license plate information for each transaction in the database.</li> <li>The system should have options to search historical records for post event analysis by the vehicle colour or the vehicle colour with license plate and date time combinations.</li> </ul>
3.	Alert Generation	<ul style="list-style-type: none"> <li>The system should have option to input certain license plates according to the hot listed categories like "Wanted", "Suspicious", "Stolen", etc. by authorized personnel.</li> <li>The system should be able to generate automatic alarms to alert the control room personnel for further action, in the event of detection of any vehicle falling in the hot listed categories</li> </ul>
4.	Vehicle Status Alarm Module	<ul style="list-style-type: none"> <li>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).</li> <li>The Instantaneous and automatic generation of alarms. In case of identity of vehicle in any category which is define by user.</li> </ul>
5.	Vehicle Log Module	<ul style="list-style-type: none"> <li>The system should enable easy and quick retrieval of snapshots, video and other data for post incident analysis and investigations.</li> <li>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 should include:</li> <li>Report of vehicle flow at each of the installed locations for Last Day, Last Week and Last Month.</li> <li>Report of vehicles in the detected categories at each of the installed locations for Last Day, Last Week and Last Month.</li> <li>Report of Vehicle Status change in different Vehicle Categories.</li> </ul>

S. No.	Parameter/ requirement	Minimum specifications/requirements
		<ul style="list-style-type: none"> <li>The system should have Search option to tune the reports based on license plate number, date and time, site location as per the need of the authorities.</li> <li>The system should have option to save custom reports for subsequent use. The system should have option to export report being viewed to common format for use outside of the ANPRS or exporting into other systems.</li> <li>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).</li> </ul>
6.	Vehicle Category Editor	<ul style="list-style-type: none"> <li>The system should have option to input certain license plates according to category like "Wanted", "Suspicious", "Stolen", and "Expired" etc. by Authorized personnel.</li> <li>The system should have an option to add new category by authorized personnel.</li> <li>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 "Retrieved".</li> <li>System should have option to specify maximum time to retain vehicle records in specific categories.</li> </ul>
7.	Central Management Module	<ul style="list-style-type: none"> <li>The Central Management Module should run on the ANPRS Central Server in control booth. It should be possible to view records and edit hotlists from the Central Server</li> </ul>
8.	Centralized Video Management Module	<ul style="list-style-type: none"> <li>Besides recording the snaps &amp; video clips of every license plate extracted, it is also required that a centralized video management software is also supplied to achieve the below: -</li> <li>Continuous recording of every lane video irrespective of presence of vehicle.</li> <li>Such recording schedules can be continuous, event based, schedule based, trigger based etc.</li> <li>Archive Search using dates, time, event etc.</li> <li>High Availability/Redundancy of Recording &amp; Database.</li> <li>Health monitoring module - To allow for continuous monitoring of the operational status and event-triggered alarms from servers, cameras and other devices. The health monitoring module should provide a real-time overview of alarm status or technical problems while allowing for immediate visual verification and troubleshooting.</li> <li>Virtual Matrix – To allow viewing of live video in different layouts on operator screen.</li> <li>The centralized Video Management Module should be part of same ANPR software framework</li> </ul>

## 19 Traffic Violation and Detection System (TVDS) – RLVD/ANPR

- a. The TVDS sub-system shall have an ANPR based on non-intrusive type of enforcement for detecting various traffic violations.
- b. The TVDS shall automatically detect the license plate in the captured video feed in real-time.
- c. The system should work seamlessly with the ANPR sub-system to perform OCR (Optical Character Recognition) of the license plate characters (English alpha-numeric characters in standard fonts) and convert into machine readable format for further processing.
- d. The system shall be capable of storing JPEG image of the violating vehicle along with its license plate and enter the license plate number into the database along with date, timestamp and site location details.
- e. The TVDS system should instantaneously (within 4 seconds) receive the processed ANPR of the violating vehicle from the ANPR sub-system.
- f. The system should store a continuous unaltered video clip of the vehicle approaching and leaving the violation location in the database.
- g. The TVDS sub-system should work in both day and night conditions with the defined minimum accuracy levels.
- h. The TVDS sub-system should work with minimum intervention and maximum accuracy levels in all weather conditions
- i. The system should at least have 95% of violation detection accuracy as the minimum accuracy level irrespective of the type of violation, time and condition of the violation in the field in terms of Standard number plate
- j. The system should be able to provide Unique Case number for each of the Violation Detected.
- k. The system should be capable of providing a search and filter option to find specific cases at any point of time
- l. Type of Violations – The following type of traffic violations should be automatically detected using the appropriate non-intrusive technology in each case as applicable. All the traffic violations should be seamlessly integrated with the ANPR sub-system and maintain the status of each violation till closure in the database.
  - Red Light Violation & Detection (RLVD) with ANPR
  - Zebra Crossing Violation/ Stop Line Violation with ANPR
  - Speed detection with ANPR
  - Wrong Direction Vehicle Movement with ANPR
- m. Red Light Violation Detection (RLVD) – The non-intrusive RLVD sub- system should be capable of capturing multiple Infraction Vehicle Data (IVD) simultaneously on each arm of the junction at any point of time.
- n. Zebra Crossing / Stop Line Violation at Junctions – The non-intrusive system should be capable of detecting the violations and capturing multiple IVD simultaneously on each arm of the junction at any point of time.
- o. Speed Violations - The nonintrusive system shall be capable of measuring speed of vehicles and capture over speed vehicles. The Speed measurement should support multiple methods for calculation of speed – either Average or Instantaneous Speed Measurement methods. Speed accuracy of +/-5KMPH is expected.
- p. Wrong Direction Vehicle Movement – The non-intrusive system should be installed at critical junctions to capture the wrong direction vehicle movement. The system should identify and capture multiple IVD. The E-Challan standard procedure should be triggered.
- q. The TVDS should have provision to be seamlessly integrate with e-challan sub-system which is capable of providing a legally binding court evidence following a proven and a robust procedure.

- r. The TVDS system shall have an operations monitoring dashboard, located at the ICCC
- s. The ANPR system shall capture vehicle license plate from front or from rear depending on the proposed solution and ensuring the performance Parameters are met.
- t. The ANPR sub-system is also used for identifying hot-listed vehicles. The system should have option to input certain license plates according to the hot listed categories like "Wanted", "Suspicious", "Stolen", etc. by authorized personnel.
- u. The TVDS along with the ANPR system when seamlessly integrated with the e-challan system shall generate challans (tickets) to various traffic violators.
- v. The ANPR sub-system shall be used for satisfying various add-on use- cases such as stolen vehicle identification.
- w. ANPR system is used to identify vehicles by their registered number plates.
- x. The ANPR sub-system shall have the following minimum accuracy levels irrespective of any other reason at the installed location for each of the vehicles in the field of view during any time of the day or night:
  - At a minimum of 90% vehicle detection accuracy.
  - the system should have a conversion accuracy of more than 85% for the detected vehicles for ANPR for standard format license plates
  - the system should have a conversion accuracy of more than 70% for the detected vehicles for ANPR for non-standard format license plates Exclusions: whitewash, broken and dirty
- y. The following are the minimum details of the infracting vehicle to be captured:
  - Location Name and ID along with Latitude and Longitude
  - Date & Time of the instance
  - Vehicle Number plate (Captured & Processed)
  - Headway
  - Image of the vehicle
  - Direction of Travel
  - Instantaneous Speed of the vehicle
- z. Court Evidence Standard Procedure – The ANPR system should provide the Color video & image evidences of infracting vehicles to be submitted in the court.
- aa. The tamper-proof video extract shall be provided as a supporting evidence (for submission in a court of law) to each infracting vehicle and the video length shall be t-5 to t+5 seconds where t being the instant at which the infraction occurred. The video output should be in color in any industry standard format such as MJPEG, MP4, AVI etc.,) with visually readable license plate number.
- bb. The system shall have options to search historical records for post event analysis by the vehicle color or the vehicle color with license plate and date time combinations

## 20 10 KVA UPS with battery backup of 60 mins

S. No.	Parameter/ requirement	Minimum specifications/requirements
1.	Capacity	Indicative capacity Viewing centre – 10 KVA
2.	Output Wave Form	Pure Sine wave
3.	Input Power Factor at Full Load	$\geq 0.95$ or better
4.	Input Voltage	380/400/415V AC (3 Phase +N)

S. No.	Parameter/ requirement	Minimum specifications/requirements
5.	Input voltage range	110-300 V AC
6.	Input Frequency	50/60 Hz
7.	Output Voltage	380/400/415V AC (3 Phase +N)
8.	Output Frequency	+/- 0.1% (Free running); +/- 3% (Sync. Mode) or better
9.	Inverter efficiency	>95% or better
10.	Overall AC-AC Efficiency	>85%
11.	Technology	True Online Double Conversion · IGBT technology · PWM inverter switching technology
12.	UPS shutdown	UPS should shutdown with an alarm and indication on following conditions <ul style="list-style-type: none"> <li>• Output over voltage</li> <li>• Output under voltage</li> <li>• Battery low</li> <li>• Inverter overload</li> <li>• Over temperature</li> <li>• Output short</li> <li>• Fan fault</li> </ul>
13.	Display	LCD/LED
14.	Battery Backup	60 minutes in full load
15.	Battery	Battery Technology - support VRLA/SMF / Lithium Ion phosphate with Battery Management Technology to protect the battery from overcharge condition
16.	Indicators & Metering	Indicators for AC Mains, Load on Battery, Fault, Load Level, Battery Low Warning, Inverter On, UPS on Bypass, Overload Metering for Input Voltage, Output Voltage and frequency, battery voltage, Output current
17.	Audio Alarm	Battery low, Mains Failure, Over temperature, Inverter overload, Fault etc.
18.	Operating Temperature	0 to 45 degrees centigrade
19.	Standard	ISO 9000, ISO 14001, ISO 27001, RoHS

## 21 30 KVA DG Set

S. No.	Parameter/ requirement	Minimum specifications/requirements
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S. No.	Parameter/ requirement	Minimum specifications/requirements
1.	Design	Water cooled, Naturally Aspirated 1500 RPM. under NTP conditions of BS: 5514, with Dry Type Air Cleaner, Compact Radiator with Recovery Bottle and Pusher type Fan, Engine with Coolant, Engine mounted panel with wiring harness, Holset Coupling and Industrial Silencer, as per engine manufacturers design standards. Power output guaranteed within 0 to +2 % and can be operated up to 3130 Mt. altitude and no de-rating for ambient temperature or humidity. The DG units should come with sound proofing as per the standards
2.	Alternator	Standard design Alternator, rated at 0.8 PF, 250 Volts, 3 Phase, 4 wires, 50 cycles/sec
3.	Alternator	1500 RPM, self-excited and self-regulated, with brushless excitation
4.	Alternator	Self- ventilated, Screen Protected Drip Proof,
5.	Alternator	Insulation Class "H",
6.	Alternator	enclosure IP 23
7.	Alternator	The A.C. Generator shall be Horizontal foot mounted single bearing type and shall be fitted with Automatic Voltage Regulator (AVR) for Voltage regulation of +/- 1% or better. The Alternator generally conforms to BS: 5000/IS: 4722 and suitable to deliver output of suitable engine capacity
8.	Base Frame	Sturdy, fabricated, welded construction, channel iron Base Frame for mounting the above Engine and Alternator
9.	Control Panel	Cubicle type, floor mounting Control Panel, with hinged doors, bottom gland plate and accommodating the following: <ul style="list-style-type: none"> <li>○ 1-No. ACB or Moulded Case Circuit Breaker</li> <li>○ 3-No.'s Ammeters /1 No. Ammeter with Selector Switch</li> <li>○ 1 No. Voltmeter with Selector Switch</li> <li>○ 1 No. frequency meter</li> <li>○ 1 Set Pilot Lamps LOAD ON/GENERATOR ON</li> <li>○ 1 Set Instrument Fuses</li> </ul>
10.	Fuel Tank	Necessary litters capacity Fuel Tank with mounting brackets to run for 8 hours, complete with level indicator, fuel inlet and outlet, air vent, drain plug, inlet arrangement for direct filling and set of fuel hoses for inlet and return. Diesel storage requirement for minimum 72 hours should be maintained
11.	Battery	Dry uncharged maintenance free batteries with leads and terminals
12.	Management	The DG set should be manageable via Building Management System/ NOC with MODBUS Protocol with RS 485 Communication Port so that all software features like Diesel Consumption, Power, and Current etc. can be monitored on the BMS screen

## 21.1

### SLA REQUIREMENT:

Service Level Agreement (SLA) is the agreement to be also signed between PPHC and the selected Bidder for the project. SLA defines the responsibility of the vendor in ensuring the project performance based on the agreed Performance Indicators as detailed in the Agreement. This section defines various Service Level Indicators for Mohali City Surveillance Project.

PPHC would monitor the compliance of SLAs at every review meeting.

The table below summarizes the indicative Performance Indicators for the services to be offered by the selected bidder. The equipment and services availability should be recorded electronically (through NMS including uptime %) and physically by the SI.

S. No.	Indicative SLA Parameter	SLA Target
1	Round-the-clock availability of all components in a Quarter of year i.e. three months for QGR calculation – <ul style="list-style-type: none"><li>• Surveillance Cameras (including RLVD and ANPR Cameras).</li><li>• Outdoor Switches, Control Room Switches, NMS Software”</li><li>• Outdoor UPS Power</li><li>• Network connectivity</li></ul>	99%
2	Round-the-clock availability of “Command and Control Room (CCC) UPS and DG Power” during a Quarter of year for QGR calculation.	100%
3	Availability of Personnel for (8hrsX 365 days) logging calls and problem rectification	98%

### Network Operations Management

The network operator is required to provide a contact number and this number shall act as a SPOC (Single Point of Contact) for all the equipment, software and services related issues reported by the staff or any other related stakeholders of this surveillance project.

S.No	Severity	Issue Resolution Time
1	Level 1	Within 4 hours of occurrence
2	Level 2	Within 8 hours of occurrence
3	Level 3	Within 24 hours of occurrence

### Severity Level Definition

<b>Level 1:</b>	The service / network outage, security or performance related issues impacting the services availability/performance and leading to <b>unavailability of whole system.</b>
<b>Level 2:</b>	The service / network outage, security or performance related issues impacting the services availability/performance and leading to <b>unavailability of the services at one or more locations</b>

<b>Level 3:</b>	The network outage, security or performance related issues impacting the network availability/performance and leading to <b>unavailability of the services from one or more cameras.</b>
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**Note: Failing in restoring the affected services within stipulated time will attract penalty of Rs. 1,000/- per instance per day and this will be additional to the penalties mentioned in clause 6.5.**

### Measurement of SLA

The monitoring & measurement of SLA and audit shall be performed by the PPHC identified third party agency and independent of the Project Service Provider.

The successful Bidder shall establish a Network Management System (NMS) for monitoring and measurement of the SLA parameters identified for the project. The NMS implemented for the project shall conform to the open network management standards such as Simple Network Management Protocol (SNMP) and Remote Monitoring (RMON) features.

The successful Bidder shall provide the NMS logs from time to time for monitoring and audit the SLA parameters identified for the surveillance project operations. The PPHC reserves the right to periodically change the measurement points and methodologies it uses without notice to the Service provider of the project.

### PENALTIES:

The successful Bidder shall be penalized as per the services (i.e. availability) provided to PPHC

Description	Availability	Penalty
Round-the-clock availability of below given components in a Quarter of year i.e. three months for calculation.  <ul style="list-style-type: none"> <li>Surveillance Cameras (including RLVD and ANPR Cameras).</li> <li>Outdoor Switches, Control Room Switches, NMS Software"</li> <li>Outdoor UPS Power</li> <li>Network connectivity</li> </ul>	Within SLA	Nil
	Between 98% to <99%	5% of the components
	Between 97% to <98%	10% of the components
	Between 96% to <97%	20% of the components
	Between 95% to <96%	25% of the components
	Less than 95%	No payment
Round-the-clock availability of "Command and Control Room (CCC), UPS and DG Power" during a Quarter of year	Within SLA	Nil
	Between 99% to <100%	5% of the total
	Between 98% to <99%	10% of the total
	Between 97% to <98%	20% of the total
	Between 96% to <97%	25% of the total
	Less than 96%	No payment
Availability of personnel for (8hrsX6days per	Within SLA	Nil



week) logging calls and problem rectification	Between 97% to <98%	5% of the total
	Between 96% to <97%	10% of the total
	Between 95% to <96%	20% of the total
	Between 94% to <95%	25% of the total
	Less than 94%	No payment

### **Operational Penalties**

In the event the Service provider is unable to meet any one of the SLA parameters defined in this RFP during two quarters in a year or four quarters during the three years of the contract, PPHC reserves the right to terminate the contract.

**Note:-**

- If the original equipment is replaced by temporary substitute equipment within resolution period, the penalty will not be charged for one week from the date of substitution /replacement.
- If the same is not repaired/ replaced within one week, the penalty at the above rate will be charged thereafter for one week and the same shall be 2 (two) times thereafter.
- If the total penalty reaches an amount equal to or more than 10% of the order value, the same shall invoke from the PBG and the process of termination of service as defined in the RFP may be initiated by PPHC.

### **Penalties for misuse**

In case of misuse of data / network / equipment at the instance of the selected Bidder, the penalty imposed on the Bidder, without prejudice by the PPHC/ GoP, other remedies under the Agreement shall be 200% of the final bid amount under the Agreement and also PPHC/ GoP may terminate the Agreement.

## **22 SPECIAL CONDITIONS OF CONTRACT:**

### **22.1 Force Majeure**

Neither party shall be responsible to the other for any delay or failure in performance of its obligations due to any occurrence commonly known as Force Majeure which is beyond the control of any of the parties, including, but without limited to, fire, flood, explosion, acts of God or any Governmental body, public disorder, riots, embargoes, or strikes, acts of military authority, epidemics, strikes, lockouts or other labour disputes, insurrections, civil commotion, war, enemy actions. If a Force Majeure arises, the Sole / Lead Bidder shall promptly notify Tenderer in writing of such condition and the cause thereof. Unless otherwise directed by Tenderer, the successful Sole / Lead Bidder shall continue to perform his obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. The successful Sole / Lead Bidder shall be excused from performance of their obligations in whole or part as long as such causes, circumstances or events shall continue to prevent or delay such performance.

### **22.2 Liquidated Damages**

Subject to clause for Force Majeure, if the Sole / Lead Bidder fails to complete the project deliverables within scheduled timelines or the extended date or if any.

1. Vendor repudiates the contract before completion of the work, the PPHC at its discretion may without prejudice to any other right or available remedy, may recover 1% per week subject to a maximum of 6% (Six percent) of the total project cost from the Vendor as Liquidated Damages (LD). If the delay continues further (i.e. beyond 6 weeks) PPHC may terminate the contract.
2. In the case it leads to termination, the PPHC shall give 30 days' notice to the vendor of its intention to terminate the contract and shall so terminate the contract unless during the 30 days notice period the vendor initiates remedial action acceptable to the PPHC.

The PPHC may without prejudice to its right to affect recovery by any other method deduct the amount of liquidated damages from any money belonging to the vendor in its hands (which includes the PPHC right to claim such amount against vendor's Performance Bank Guarantee) or which may become due to the vendor. Any such recovery or liquidated damages shall not in any way relieve the vendor from any of its obligations to complete the works or from any other obligations and liabilities under the Contract.

### **22.3 Taxes and Duties**

- a) All the taxes, duties, levy and all other charges applicable and shall be valid for delivery on for basis to the designated delivery points. All payments will be subjected to tax deduction at source as applicable/required at the prevailing tax rates.
- b) PPHC shall not pay any increase in duties, taxes and surcharges and other charges on account of any revision, enactment during the period of validity of the Bids and also during the contract period. The decision of PPHC in this regard will be final and binding and no disputes in this regard will be entertained.

### **22.4 Payment Terms**

No advance payments shall be done by PPHC under any circumstance. The selected Sole / Lead Bidder shall be paid only on completion of milestones at the rates specified by the Sole / Lead Bidder and agreed upon.

PPHC shall make payment after the successful implementation/completion of every milestone of any given phase when the Sole / Lead Bidder claims for payment with the following supporting document:

1. Acceptance certificate by PPHC
2. SLA compliance report as prepared by the vendor and approved by consultant
3. All supporting documents like the delivery challans, bills, invoices etc.
4. Submission of the CCC and Field equipment operations log and NMS report
5. Biometric Attendance report duly certified by competent authority of FMS/ support staff

### **22.5 Intellectual Property Rights**

All intellectual property rights for the work performed under this RFP as far as data is concerned shall lie with PPHCs. This clause is applicable to all data in any form or format designed

and developed for PPHC under this RFP by the Sole / Lead Bidder. The Sole / Lead Bidder shall not use such data for any other purpose during and after the term of contract.

## **22.6 Indemnity**

Successful Sole / Lead Bidder/SI shall indemnify, protect and save PPHC against all claims, proceeding, liabilities, losses, costs (including legal costs), damages, expenses and action suits, resulting from infringement of any patent, trademarks, copyrights, any other statutory infringements in respect of all the hardware / software supplied by them or expenses whatsoever arising out of or resulting from any loss or damage to the property or personnel of PPHC, relating to the performance of the Project whether or not such loss or damage is caused or contributed to by negligence or other default of SI / vendors or their Authorized User.

## **22.7 Validity of Licenses**

Sole / Lead Bidders should guarantee that any software supplied to PPHC and to any other location as part of the contract mentioned in this RFP are licensed and legally obtained. Licenses supplied for all components including all hardware and software should be "Permanent, Perpetual and Lifetime Licenses", which should enable the department to use the same without any restrictions during the project as well as after the contract with the selected Sole / Lead Bidder is over.

## **22.8 Insurance Coverage**

The responsibility to maintain adequate insurance coverage on comprehensive all risk basis at all times during the project period in all respects shall be that of the Sole / Lead Bidder alone.

Goods supplied under the contract shall be also fully insured on all risks including fire, theft, flood, earth quake and other natural calamities at Sole / Lead Bidder own cost basis during inland transit up to destination defined in the purchaser's country. The supplier must insure the goods in an amount equal to 110% of CIF/EXW price of goods.

## **22.9 Approval / Clearances**

Necessary approvals/ clearances from concerned authorities (like District Administration, Municipalities, Public Works Department (PWD), Department of Building Construction, State Electricity Board etc.), as required, shall be obtained by Sole / Lead Bidder although PPHC will facilitate Sole / Lead Bidder for the same, and the cost involved in the same must be included in bid.

## **22.10 Governing Laws**

- i. This Agreement shall be covered and construed in accordance with Laws of India including without limitation, the relevant Central and State Acts and Rules, Regulations and Notifications issued and amended there under from time to time.
- ii. Courts at Mohali shall have the jurisdiction in case of litigation between the parties.

## **22.11 Guarantee**

The goods/equipment ordered for supply / delivery must be new and should be from the manufacturer's current product line. The vendor should guarantee that the Goods supplied are

new, unused and conform to technical specifications of design, materials and workmanship mentioned in the quotation. The Supplier should also guarantee that the Goods supplied should perform satisfactorily as per requirements mentioned in the specification during implementation and operation & maintenance period. All hardware and software must be supplied with their originals along with complete original printed documentation and licenses

## **22.12 Exit Management**

1. Upon completion of the contract period or upon termination of the agreement for any reasons, the successful Sole / Lead Bidder shall comply with the following:
  - a) Notify to PPHC forthwith the particulars of all Project Assets;
  - b) Deliver forthwith actual and constructive ownership and possession of the assets free and clear of all Encumbrances and execute such deeds, writings and documents as may be required by PPHC for fully and effectively divesting the successful Sole / Lead Bidder of all of the rights, title and interest of the successful Sole / Lead Bidder in the project;
  - c) Comply with the divestment requirements set out in this RFP in case if termination of this agreement is due to PPHC event of default, Indirect Political Event or Political Event the Successful Sole / Lead Bidder shall have implemented the maintenance schedule as well as any repairs pointed out by the Independent Consultant in its Operations & Maintenance Inspection Report prior to date of Termination Notice. In case of Termination due to Non-Political Force Majeure Event, the Divestment Requirements shall be agreed between PPHC and the Successful Sole / Lead Bidder; and
  - d) Pay all transfer costs and stamp duty applicable on handing back of project assets except in case the Project is being transferred due to PPHC of Default, Indirect Political Event, Political Event or expiry of Concession period, where PPHC shall be responsible for transfer costs and stamp duty, if any. For clarification of doubt, transfer costs in this Clause relate to taxes and duties applicable at transfer of the Project, if any.
2. Subject to clauses of exit management, upon completion of the contract period or upon termination of the agreement, the successful Sole / Lead Bidder shall comply and conform to the following Divestment Requirements in respect of the Project:
  - a) All Project Assets including the hardware, software, documentation and any other infrastructure shall have been renewed and cured of all defects and deficiencies as necessary so that the Project is compliant with the Specifications and Standards set forth in the RFP, Agreement and any other amendments made during the contract period;
  - b) The Successful Sole / Lead Bidder delivers relevant records and reports pertaining to the Project and its design, engineering, operation, and maintenance including all operation and maintenance records and manuals pertaining thereto and complete as on the Divestment Date;
  - c) The Successful Sole / Lead Bidder executes such deeds of conveyance, documents and other writings as the PPHC may reasonably require to convey, divest and assign all the rights, title and interest of the Successful Sole / Lead Bidder in the Project free from all Encumbrances absolutely and free of any charge or tax unto the PPHC or its Nominee; and
  - d) The Successful Sole / Lead Bidder complies with all other requirements as may be

prescribed under Applicable Laws to complete the divestment and assignment of all the rights, title and interest of the project, free from all Encumbrances absolutely and free of any charge or tax to PPHC or its nominee.

3. Not earlier than 3 (three) months before the expiry of the contract Period but not later than 30 (thirty) days before such expiry, or in the event of earlier Termination of the contract, immediately upon but not later than 15 (fifteen) days from the date of issue of Termination Notice, the Independent Consultant as nominated by PPHC shall verify, in the presence of a representative of the Successful Sole / Lead Bidder, compliance by the Successful Sole / Lead Bidder with the Divestment Requirements set forth in the RFP in relation to the Project and, if required, cause appropriate tests to be carried out at the successful Sole / Lead Bidder's cost for determining the compliance therewith. If either Party finds any shortcomings in the Divestment Requirements, it shall notify the other of the same and the Successful Sole / Lead Bidder shall rectify the same at its cost.
4. Upon the Successful Sole / Lead Bidder conforming to all Divestment Requirements and handing over actual or constructive possession of the Project to PPHC or a person nominated by PPHC in this regard, PPHC shall issue a certificate substantially in the form set forth in RFP, which will have the effect of constituting evidence of divestment of all rights, title and lien in the Project by the Successful Sole / Lead Bidder and their vesting in Project pursuant hereto. State Government shall not unreasonably withhold issue of such certificate. The divestment of all rights, title and lien in the Project shall be deemed to be complete on the date when all the Divestment Requirements have been fulfilled or the Certificate has been issued, whichever is earlier, it being expressly agreed that any defect or deficiency in any Divestment Requirement shall not in any manner be construed or interpreted as restricting the exercise of any rights by State Government or its nominee on or in respect of the Project on the footing as if all Divestment Requirements have been complied with by the Concessionaire.

### **22.13 Bankruptcy and Insolvency**

PPHC can terminate the contract if the Sole / Lead Bidder becomes bankrupt and/or losses the desired state of insolvency with a notice of 15 days. The PPHC, in such cases of termination, will not be responsible for any loss or financial damage to the service provider resulted due to the termination. The PPHC will also, in such cases have the right to recover any pending dues by invoking the performance bank guarantee or any such instrument available with the department.

### **22.14 Maintenance of Equipment**

The selected Sole / Lead Bidder shall ensure that services of a professionally qualified personnel is available for providing comprehensive on-site maintenance and administration (on 24 X 7 basis) of hardware and software for a period of five years (hardware and system software).

In the event of network break down or failures at any stage, protection available, which would include the following, shall be specified.

- i. Diagnostics for identification of hardware failures
- ii. Recovery/restart network

The Sole / Lead Bidder should maintain stock of critical components to meet SLA. The comprehensive maintenance would be inclusive of all spares need to be replaced.

The Sole / Lead Bidder shall guarantee the availability of spares for a period of at least five

years in respect of all the hardware and software.

#### **22.15 Handing over**

At the end of the operation and maintenance services period, PPHC may exercise its option to renew the AMC and FMS with the existing vendor or may invite fresh bids for subsequent AMC and FMS.

If handover is required to any other System Integrator other than the vendor, at the end of the existing contract period or otherwise, the vendor would be responsible for handing over the complete hardware including know-how documentation records and all such relevant items that may be necessary for the transition process.

PPHC reserves the right to quarterly extend the contract period after completion of the agreement period; and PPHC will pay for such extended period on prorata basis.

**Annexure – B:**  
**Template for Pre-Bid Conference Queries**

RFP purchase receipt no: Date:

Name of the Sole / Lead Bidder: Address:

Telephone Nos: Fax No:

Mobile No:

Email ID:

<b>Sl No:</b>	<b>Page No. in the RFP</b>	<b>Section No:</b>	<b>Clause No:</b>	<b>Particulars of the query / clarification</b>	<b>Remarks</b>
1					
2					
3					
4					

Authorized Signatory

Designation

(If the queries / clarifications are submitted through e-mail, the Sole / Lead Bidder should send the queries / clarifications through official e-mail IDs only.)

## Annexure – C

### Site Not Ready (SNR) Certificate Template

1.	Agency / Vendor Name	
2.	Project Name	
3.	Purchase Order No. & date	
4.	Equipment Name	
5.	Date of delivery	
6.	Date of 1 <sup>st</sup> Visit for installation	
7.	Site not ready reason	
8.	Tentative date of site being ready for installation	
9.	Contact detail of vendor for getting equipment installed, if site get ready.	
10.	Certificate	There is no delay on the part of vendor in getting the equipment installed
11.	<p>Name of User/ Department Official site in charge:</p>  <p>Designation:</p>  <p>Signature:</p> <p>(with official seal) Date:</p>	



## Annexure – D

## Installation Certificate

1.	Agency/ Vendor Name	
2.	Project Name	
3.	Purchase Order No. & date	
4.	Equipment Name & Description	
5.	Equipment Serial No.	1)
		2)
		3)
6.	Date of delivery	
7.	Date of intimation of call for installation /site readiness information (in case of SNR)	
8.	Installation Date	
9.	Certificate	Equipment (As per ordered configuration) has been installed successfully
10.	Name of User/ Department Official site in charge:   Designation :   Signature: (with official seal)Date:	

## Annexure – E

### Bid Letter (Prequalification cum Technical) Template

Date: dd/mm/yyyy

To,

<< Address>>

**Reference:** Tender Number\_\_\_\_\_ Dated\_\_\_\_\_

Sir,

We hereby declare:

- i. We are the authorized agents of the manufacturers / developer of the hardware / networking equipment and system software proposed in our solution.
- ii. That we are equipped with adequate maintenance and service facilities within India for supporting the offered equipment and software. Our maintenance and service facilities are open for inspection by representatives of PPHC.

We hereby offer to supply the equipment / system software and provide the services at the prices and rates mentioned in the attached commercial bid.

In the event of acceptance of our bid, we do hereby undertake:

- iii. To supply the equipment / system software and commence services as stipulated in the schedule of delivery forming a part of the attached technical bid.
- iv. We affirm that the prices quoted are inclusive of delivery, installation, and commissioning charges and all taxes.

We enclose herewith the complete Technical Bid as required by you. This includes:

1. Bid particulars
2. This bid letter
3. Proposed Surveillance system architecture, detailed technical solution, equipment and services offered
4. Proposed Project Plan and Implementation Schedule
5. Statement of deviation from requirement specifications
6. Statement of deviation from tender terms and conditions
7. Schedule of delivery
8. Warranty for the period of 3 years for all the equipments / system software supplied through this RFP
9. Manufacturer's authorization form(s)

We agree to abide by our offer for a period of 180 days from the last date of submission of commercial bid prescribed by PPHC and that we shall remain bound by a communication of acceptance within that time.

We have carefully read and understood the terms and conditions of the tender and the conditions of the contract applicable to the tender. We do hereby undertake to provision as per these terms and conditions. Apart from that agree to abide by the following:

- a. We shall give benefit of any price reduction found by the time of placing the supply order.
- b. We agree to accept partial order if it is placed.

- c. We have quoted rates of items for Five (5) years comprehensive on-site (COS) warranty, with spares and labor charge.
- d. In case the item quoted is imported, direct shipment of the entire machine/item including add-ons from OEM, is ensured & would be provided. It is undertaken that no item supplied is used/reprocessed or refurbished in any manner either in part or otherwise.
- e. The above document is executed on \_\_\_/\_\_\_/yyyy at (place) \_\_\_\_\_ and we accept

that if anything out of the above information is found wrong, our tender shall be liable for rejection.

- f. We hereby undertake that all the components/parts/assembly are original and no duplicate parts are used in the entire manufacturing process.

There are no deviations from the RFP document of the tender.

We hereby certify that the Sole / Lead Bidder is a Directorate and the person signing the tender is the constituted attorney.

Bid Security in the form of a Demand Draft / Bank Guarantee issued by \_\_\_\_\_ (bank), valid till \_\_\_/\_\_\_/\_\_\_\_\_ (dd/mm/yyyy), for an amount of Rs. \_\_\_\_\_ is enclosed in the cover containing pre-qualifying requirements.

We do hereby undertake, that, until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and notification of award of contract, shall constitute a binding contract between us.

\_\_\_\_\_  
**Signature of Sole / Lead Bidder (with official seal)**

**Date**

\_\_\_\_\_

**Name**

**Designation**

**Address**

**Telephone**

**Fax**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**E-mail address**

\_\_\_\_\_

\_\_\_\_\_

**Details of Enclosures:**

**Index Page Nos**

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## **Annexure – F**

### **Template for Undertaking of Authenticity**

Date: dd/mm/yyyy

**To,**

**CMD, PPHC**

**Subject:** Supply, Installation, Commissioning & Maintenance of Mohali City Surveillance Project.

Ref: 1. Your LOI No \_\_\_\_\_ dated \_\_\_\_\_.

With reference to Mohali City Surveillance Project being implemented/ quoted to you vide our invoice no. / Quotation no. /order no. cited above.

We hereby undertake that all equipment and other items shall be original new components/parts/assembly only, from respective OEMs of the products and that no refurbished/duplicate/second hand Hardware equipment and other items are being used or shall be used.

In case of default and we are unable to comply with above at the time of delivery or during installation, we agree to take back the items without demur, if already supplied and return the money if any paid to us by you in this regard.

We (IT Company/ Integrators name) also take full responsibility of both Parts & Service SLA as per the content even if there is any defect by our authorized Service Centre/Reseller/Sl. etc.

**Authorized Signatory: Name:**

**Designation:**

## Annexure – G

### Sole / Lead Bidder profile

Sr. No	Details	
1	Name of the Firm	
2	Registered Office address Telephone Number  e-mail	
3	Correspondence/ contact address	
4	Details of Contact person  (Name, designation, address etc.) Telephone Number  e-mail	
5	Is the firm a registered company? If yes, submit documentary proof.  Year and Place of the establishment of the Company	
6	Former name of the company, if any.	
7	Is the firm Government/ Public Sector Undertaking partnership firm (if yes, give partnership deed) limited company or limited corporation member of a group of companies (if yes, give name and address, and description of other companies)	
	subsidary of a large corporation (if yes give the name and address of the parent organisation) If the company is subsidiary, state what involvement if any, will the parent company have in the project.	
8	Is the firm registered with sales tax department? If yes, submit valid sales tax registration certificate.	
9	Is the firm registered for service tax with Central  Excise Department (Service Tax Cell)? If yes, Submit valid service tax registration certificate.	
10	Is the firm registered under Labour Laws Contract Act? If yes, submit valid registration certificate.	

11	<p>Attach the organizational chart showing the structure of the organization including the names of the directors and the position of the officers.</p> <p>Total number of employees</p>	
12	Number of years of experience:	
13	<p>Are you registered with any Government/</p> <p>Department/ Public Sector Undertaking (if yes, give details)</p>	
14	<p>How many years has your organization been in business under your present name? What were your fields when you established your organization?</p> <p>When did you add new fields (if any)?</p>	
15	<p>What type best describes your firm? (documentary proof to be submitted)</p> <p>Manufacturer</p> <p>Supplier</p>	
	<p>System Integrator</p> <p>Consultant</p> <p>Service Provider (pl. specify details)</p> <p>Software Development</p> <p>Total solution provider (Design, Supply, Integration, O&amp;M)</p> <p>IT Company</p>	
16	Number of Offices / Project Locations	
17	<p>Do you have a local representation /office in Punjab? If so, please give the address and the details of staff, infrastructure etc in the office and no. of years of operation of the local office</p>	
18	<p>Please give details of Key Technical and Administrative staff who will be involved in this project, their role in the project, their Qualifications &amp; experience and the certification attained from network product vendor. (documentary proof to be submitted)</p>	

19	Is your organization has SEI –CMM / ISO 9000 certificates? If so, attach copies of the certificates. State details, if certified by bodies, other than that stated.	
20	List the major clients with whom your organization has been/ is currently associated.	
21	Were you ever required to suspend a project for a period of more than three months continuously after you started? If so, give the names of project and reasons for the same.	
22	Have you in any capacity not completed any work awarded to you? (If so, give the name of project and reason for not completing the work)	
23	In how many projects you were imposed penalties for delay? Please give details.	
24	The Sole/ Lead Bidder shall disclose details pertaining to all contingent liabilities, claims, disputes, matters in appeal & in court and any pending litigation against the Sole / Lead Bidder. If nil, an undertaking from the Sole / Lead Bidder/ prime member of the consortium mentioning the same.	
25	Whether your organization has Bank's certificate of solvency. If yes, submit documentary proof.	
26	Have you ever been denied tendering facilities by any Government/ Department/ Public sector Undertaking? (Give details)	

## Annexure – H

### Manufacturer's / Developer of System Software Authorization Form

Date: dd/mm/yyyy

To,

#### Reference:

Sir,

We \_\_\_\_\_, *(name and address of the manufacturer / developer)* who are established and reputed manufacturers / developer of \_\_\_\_\_ having factories/ developed centers at \_\_\_\_\_ *(addresses of manufacturing/development centers locations)* do hereby authorize M/s \_\_\_\_\_ *name and address of the Sole / Lead Bidder* to bid, negotiate and conclude the contract with you against the above mentioned tender for the above equipment manufactured / system software developed by us.

Yours faithfully,

For and on behalf of M/s \_\_\_\_\_ *(Name of the manufacturer/ developer of system software)*

Signature

Name \_\_\_\_\_

Designation \_\_\_\_\_

Address \_\_\_\_\_

Date \_\_\_\_\_

Directorate Seal

**Note:** This letter of authority should be on the letterhead of the concerned manufacturer / system software developer and should be signed by a person competent and having the power of attorney to bind the manufacturer / developer.



## **Annexure – I**

### **Firm Experience template**

1. Assignment Name:
2. Location within Country:
3. Professional Staff Provided by Your Firm
4. Name of Client:
5. No. of Staff:
6. Address:
7. No. of Staff-Months; duration of assignment
8. Start Date (Month/Year): Completion date (Month/Year):
9. Approx. Value of Services :
10. Name of Associated Consultants, if any:
11. No. of Months of Professional Staff, provided by Associated Consultants:
12. Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed:
13. Narrative Description of Project:
14. Description of Actual Services Provided by Your consultant :

**Annexure – J**

**Team Composition and Task Assignment**

<b>Sr. No.</b>	<b>Name</b>	<b>Qualifications</b>	<b>Year of Experience</b>	<b>Area of Expertise</b>	<b>Task Assigned</b>

## Annexure – K

### Curriculum Vitae for Proposed Staff

1. **Proposed Position** [only one candidate shall be nominated for each position]:
2. **Name of Firm** [Insert name of firm proposing the staff]:
3. **Name of Staff** [Insert full name]:
4. **Date of Birth:**
5. **Nationality:**
6. **Education** [Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment]:
7. **Membership of Professional Associations:**  
**Other Training** [Indicate significant training since degrees under 5 - Education were obtained]:
8. **Countries of Work Experience:** [List countries where staff has worked in the last ten years]:
9. **Languages** [For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing]:
10. **Employment Record** [Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.]:

From [Year]: To [Year]:

Employer:

Positions held:

<b>Detailed Tasks Assigned</b>	<b>Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned</b>
[List all tasks to be performed under this assignment]	[Among the assignments in which the staff has been involved, indicate the following information for those assignments that best illustrate staff capability to handle the tasks listed under point 11.]
	Name of assignment or project: Year:
	Location: Client:
	Main project features: Positions held:
	Activities performed:

#### Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Date:

Signature of staff member or authorized representative of the staff]

Full name of authorized representative

## **Annexure – L**

### **Bank Guarantee Format for EMD**

**To,  
The CMD, PPHC**

\_\_\_\_\_ Whereas..... (Hereinafter called “the Sole / Lead Bidder”) has submitted its Bid dated..... (Date of submission of Bid) for “Supply, Implementation, Commissioning & Maintenance of Mohali City Surveillance Project of the Tender NIT No. Dated \_\_\_\_\_ issued by the PPHC, Mohali (hereinafter called “the Bid”).

Whereas as per Clauses of the Bid, the Sole / Lead Bidder is required to furnish a bank guarantee as Earnest Money Deposit from a scheduled commercial bank (Bank Guarantee)

In consideration of the fact that the Sole / Lead Bidder is our valued customer and the fact that the Sole / Lead Bidder has submitted the Bid, we, (name and address of the bank), (hereinafter called “the Guarantor Bank”), has agreed to bind ourselves, our successors, and assigns to irrevocably issue this Bank Guarantee and guarantee as under

#### **NOW THIS GUARANTEE WITNESSETH: -**

1. If the Sole / Lead Bidder
  - (a) Withdraws its Bid proposal during the period of Bid validity specified by the Sole / Lead Bidder on the Technical Proposal Cover Letter; or
  - (b) Having been notified of the acceptance of its Bid P P H C , Mohali, Punjab during the period of Bid Proposal validity.
    - i. Fails or refuses to enter into the Contract; or
    - ii. Fails or refuses to furnish the performance guarantee, in accordance with the

Terms of Reference of the Tender document issued to the Sole / Lead Bidder.

The Guarantor Bank shall immediately on demand pay P P H C , Mohali without any demur and without pay PPHC, Mohali, Punjab having to substantiate such demand a sum of Rs\_\_\_\_\_ Guaranteed Amount The Guarantor Bank will make the payment of the Guaranteed Amount forthwith on the demand made by the PPHC, Mohali - notwithstanding any objection or dispute that may exist or arise between the PPHC and the Sole / Lead Bidder or any other person.

2. The demand of PPHC, Mohali on the Guarantor Bank for the payment of the Guaranteed Amount, shall be deemed as the final proof of fulfillment of the conditions stipulated in (1) above.
3. This Guarantee shall be irrevocable and shall not be discharged except by payment

of the above amount by us to the PPHC Mohali - and our liability under this Guarantee shall be restricted to the Guaranteed Amount being Rs.\_\_\_\_\_).

4. If it is necessary to extend this Guarantee on account of any reason whatsoever, we undertake to extend the period of this Guarantee on the request of the Sole / Lead Bidder under intimation to the PPHC, Mohali -
5. To give full effect to the Guarantee contained herein, PPHC - shall be entitled to act as if the Guarantor Bank is the principal debtor in respect of claims against the Sole / Lead Bidder and the Guarantor Bank hereby expressly waives all its rights of surety-ship and other rights, if any, which are in any way inconsistent with any of the provisions of this Guarantee.
6. Any notice by way of demand or otherwise may be sent by special courier, telex, fax, registered post or other electronic media to our address as afore-said and if sent by post, shall be deemed to have been given to us after expiry of 48 hours when the same has been posted.
7. Our liability under this Guarantee will continue to exist until a demand is made by PPHC in writing or up to and including One Hundred and Eighty (180) days after the period of the Bid Proposal validity, i.e. up to \_\_\_\_\_ and any demand in respect thereof should reach the Bank not later than the above date.

Dated \_\_\_\_this \_\_\_\_ Day \_\_\_\_yyyy  
Yours faithfully,

For and on behalf of the \_\_\_\_\_. Guarantor Bank

**Annexure – M:**

**Template for Un-priced Detailed Bill of Material**

S.No	Item	Make	Model	Part No.	Description of the lineItem	Line Item Qty	TotalQty	Remarks
1								
2								
3								
4								
5								

**Annexure – N:**  
**Bid letter – Commercial**

Date: dd/mm/yyyy

To,

**Reference:**

Sir,

We hereby declare:

- i. We are the authorized agents of the manufacturers / developer of system software of all the equipment / system software proposed in our solution.
- ii. That we / our principals (manufacturer / developers) are equipped with adequate maintenance and service facilities within India for supporting the offered equipment/ system software. Our maintenance and service facilities are open for inspection by representatives of Punjab Police.
- iii. We do hereby undertake that, in the event of acceptance of our bid, the supply of equipment / system software and commencement of services shall be made as stipulated in the schedule of delivery forming a part of the attached technical bid.
- iv. In the event of acceptance of our bid, we do hereby undertake that:
  - a) To supply the equipment / system software and commence services as stipulated in the schedule of delivery forming a part of the attached technical bid.
  - b) We affirm that the prices quoted are inclusive of delivery, installation, and commissioning charges and all taxes.

We enclose herewith the complete Commercial Bid as required by you. This includes:

1. This bid letter
2. Bid particulars
3. Commercial quote

We agree to abide by our offer for a period of 180 days from the last date of submission of commercial bid prescribed by Punjab Police and that we shall remain bound by a communication of acceptance within that time.

We have carefully read and understood the terms and conditions of the tender and the conditions of the contract applicable to the tender. We do hereby undertake to provision as per these terms and conditions.

- a) There are no commercial deviations.
- b) There are no deviations from the terms and conditions of the tender.

We hereby certify that the Sole / Lead Bidder is a Directorate and the person signing the

tender is the constituted attorney. Bid Security in the form of a Demand Draft / Bank Guarantee issued by\_\_\_\_\_ (bank), valid till\_\_\_\_\_ (dd/mm/yyyy), for an amount of Rupees\_\_\_\_\_ is enclosed in the cover containing pre-qualifying requirements.

We do hereby undertake, that, until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and notification of award of contract, shall constitute a binding contract between us

**Signature of Sole / Lead Bidder (with official seal**

**Name** \_\_\_\_\_

**Designation**\_\_\_\_\_

**Address** \_\_\_\_\_

**Telephone** \_\_\_\_\_

**E-mail address** \_\_\_\_\_

**Details of Enclosures:**

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### Annexure – O: Commercial Quote

S. No	Name of Goods or Related Services	Unit of Measurement	Qty. (A)	Unit Rate in INR Inclusive 3yrs AMC(B)	Taxes (C)	Unit Rate Inclusive all Taxes (D=B+C)	Total Cost for 3yrs (E=DxA)
	<b>Field equipment</b>						
1.	IR IP HD PTZ Camera with all accessories	Nos.	36				
2.	IR HD Bullet Camera with all accessories	Nos.	300				
3.	ANPR Camera with IP 66 rated outdoor housing, external IR/WHITE light illuminator of 100 Mtrs. Range	Nos.	100				
4.	RLVD Camera with IP66 rated outdoor housing	Nos.	28				
5.	Manageable Layer-2 Industrial grade Switch 8 Port 10/100 PoE and 2 SFP Ports for outdoor locations	Nos.	100				
6.	Local Processing Unit (LPU)	Nos.	100				
7.	1KVA Online UPS for Outdoor Junction (60 minutes battery backup)	Nos.	100				
8.	IP 55 Enclosure/Rack with Accessories	Nos.	100				
9.	Outdoor Armed Shape Pole with erecting kit	Nos.	200				
10.	Armed Cable	Lumpsum	Lumpsum				
11.	6 Core Optical fibre cable (OFC)	Lumpsum	Lumpsum				
12.	Patch Panel, Patch Cord for UTP Cabling NW	Lumpsum	Lumpsum				
13.	Cat 6 Outdoor cable, Outdoor Conduit and Tie	Lumpsum	Lumpsum				
14.	Media Convertors	Lumpsum	Lumpsum				

15.	Electricity Meter with rugged enclosure	Nos.	100				
16.	Site preparation including electrical wiring, digging, UTP, power cabling	Nos.	100				
17.	MPLS connectivity with required bandwidth & redundancy	Nos.	100				
	<b>Command &amp; Control Centre (CCC)</b>						
18.	Core L3 Switch in Command Centre on Active – Active mode connection	Nos.	2				
19.	Smart Racks	Nos.	2				
20.	Workstations- Intel Core i7 with Graphics Card	Nos.	15				
21.	Setting up of Local Area Network (LAN) including LAN L2 switch (in HA mode)	Lumpsum	1				
22.	Site preparation (with desk & chair) for Surveillance Control Room	Lumpsum	1				
23.	Commercial Display with min. 55-inch display screen bezel 2/3 mm	Nos.	15				
24.	Video Wall with Controller: Main Display (5x2)	Set	1				
25.	Video Wall with Controller: VIP Display (2x2)	Set	1				
26.	62 PPM Heavy duty Printer	Nos.	1				
	<b>Software</b>						
27.	VMS Solution with Analytic features - Software support, Customization, maintenance	As per Solution requirements	1				
28.	ANPR Server Software	As per Solution requirements	1				
	<b>Manpower</b>						
29.	Project Manager	Nos.	1				
30.	Shift Engineer	Nos.	3				

31.	Instructor/Trainer for training of Police Staff for on different components of the project	Nos.	1				
	<b>Connectivity at State Data Centre (SDC)</b>						
32.	MPLS aggregated required bandwidth and redundancy	Physical Links	2				
33.	Additional Items if any to make the Sole / Lead Bidder proposed solution completely						

### **Total cost in figure and words**

The amounts indicated should be final after all taxes, cess, levy, duties, insurance till the time of commissioning, transport, cartage, installation, and commissioning.

Conditional bids will be not accepted and will be summarily rejected.

#### **Witness**

Signature

Name

Designation

Address

Directorate

Date

#### **Sole / Lead Bidder**

Signature

Name

Designation

Address

Directorate

Date

**Directorate Seal**

**Annexure – P:  
Performance Bank Guarantee Format (PBG)**

To,

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Whereas .....(hereinafter called “the Sole / Lead Bidder”) has submitted its Bid dated \_\_\_\_\_ (date of submission of Bid) for execution of Mohali City Surveillance Project for PPHC in terms of the Tender dated \_\_\_\_\_ issued by PPHC, (hereinafter called “the Bid”).

Whereas as per Section \* Clause \* of the Bid, the Sole / Lead Bidder is required to furnish a bank guarantee as Performance Guarantee from a scheduled nationalised bank (Bank Guarantee)

In consideration of the fact that the Sole / Lead Bidder is our valued customer and the fact that they have submitted the Bid, we, (name and address of the bank), (hereinafter called “the Guarantor Bank”), has agreed to bind ourselves, our successors, and assigns to irrevocably issue this Bank Guarantee and guarantee as under

NOW THIS GUARANTEE WITNESSETH: -

- 1 If the Sole /Lead Bidder
  - a) Having been notified of the acceptance of its Bid by the PPHC, during the period of Bid Proposal validity:
    - i. Fails to perform as per the contract obligations.
    - ii. On invoking of Section \* Clause \*\*\* “Termination for Default”; and /or on invoking of Section \* Clause \* “Exit Management Schedule”.
- The Guarantor Bank shall immediately on demand pay the PPHC, without any demur and without the PPHC, having to substantiate such demand a sum of Rs \_\_\_\_\_ (Rupees \_\_\_\_\_) (Guaranteed Amount
- 2 The Guarantor Bank will make the payment of the Guaranteed Amount forthwith on the demand made by the PPHC, notwithstanding any objection or dispute that may exist or arise between the PPHC, and the Sole / Lead Bidder or any other person.
- 3 The demand of the PPHC, on the Guarantor Bank for the payment of the Guaranteed Amount, shall be deemed as the final proof of fulfillment of the conditions stipulated in (1) above.
- 4 This Guarantee shall be irrevocable and shall not be discharged except by payment of the above amount by us to the PPHC, and our liability under this Guarantee shall be restricted to the Guaranteed Amount being Rs \_\_ Lakhs (\_\_\_\_\_ Lakhs).

- 5 If it is necessary to extend this Guarantee on account of any reason whatsoever, we undertake to extend the period of this Guarantee on the request of the Sole / Lead Bidder under intimation to the PPHC.
- 6 To give full effect to the Guarantee contained herein, the PPHC, shall be entitled to act as if the Guarantor Bank is the principal debtor in respect of claims against the Sole / Lead Bidder and the Guarantor Bank hereby expressly waives all its rights of surety- ship and other rights, if any, which are in any way inconsistent with any of the provisions of this Guarantee.
- 7 Any notice by way of demand or otherwise may be sent by special courier, telex, fax, registered post or other electronic media to our address as afore-said and if sent by post, shall be deemed to have been given to us after expiry of 48 hours when the same has been posted.
- 8 Our liability under this Guarantee will continue to exist until a demand is made by the PPHC, in writing or up to and including 5 year 6 months from the date of signing of contract, i.e. up to \_\_\_\_\_yyyy, and any demand in respect thereof should

reach the Bank not later than the above date.

Dated \_\_\_\_\_ this \_\_\_\_\_ day \_\_\_\_\_yyyy.

Yours faithfully,

For and on behalf of the Guarantor Bank,

(Signature) Designation

(Address and Common Seal of the bank

Note: To be executed at the time of Signing of Contract by the Selected Vendor