

Tender No. _____

**DESIGN, SUPPLY, INSTALLATION
AND COMMISSIONING OF
OPEN STANDARD DIGITAL
TRUNKING
RADIO SYSTEM
FOR CHANDIGARH POLICE**

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**DIRECTOR GENERAL OF POLICE
UT POLICE
POLICE HEADQUARTER, SECTOR 9D,
CHANDIGARH
NOTICE INVITING TENDER**

e-TENDER (OPEN TENDER ENQUIRY)

E-TENDER NOTICE

For and on behalf of the President of India, **Director General of Police, Chandigarh Police**, invites tender from eligible and qualified bidders (Manufactures/ authorized distributors) for design, supply, installation and commissioning of Open Standard Digital Trunking Radio System to cover whole Chandigarh with Master Control Site at and dispatch centre at Police Headquarter Sector 9-D, Chandigarh, and hot standby site at ERSS Mirror site, Admin building, Police lines, Sector 26. The system should be installed on turnkey basis and bidder shall supply all items and services required for completion of the project.

Sl. No.	Detail	Schedule
1.	Tender Document will be available on e-procurement web portal on eProcurement System at https://chandigarh.gov.in	30.08.2025
2.	Pre-bid conference will be held at Committee Room, Provisioning & Logistics, UT Police Headquarter, Sector 9-D, Chandigarh-110054.	NA
3.	Bids, in two parts, should be submitted online	NIL
4.	Technical bid will be opened	19.09.2025
5.	Bids should be valid for acceptance at least up to	180 days from the date of opening of bid
6.	Cost of Tender Sets (Non-refundable)	NIL
7.	Earnest Money Deposit/ Bid Securing Declaration Certificate	The bidders are required to sign a Bid securing declaration as per Appendix-10, accepting that if they withdraw or modify their bid during the period of validity, or if they are awarded the contract and they fail to sign the contract, or to submit a performance security before the deadline defined in the request of bids document, they will be suspended for the period of 02 years from being eligible to submit bid for contracts with the procuring entity. EMD shall be deposited in box no. 4 ground floor Police Headquarters Sector-09 Chandigarh.

If any of the date at Sl No 1,2,3 and 4 are declared holidays, the closed days for the purchase, the date will automatically extend to next working day.

All Items as per Chapter-3	Consignee Location
	Director General of Police, Chandigarh Police, UT Police Headquarter, Sector 9-D, Chandigarh-160009

-sd-
SP (Communication)
Chandigarh Police

SCHEDULE TO TENDER

1.	Description of the stores	:	For Design, Supply, Installation and Commissioning of Hardware and Software for Open Standard Digital Trunking Radio System for Chandigarh Police as mentioned in Chapter-3&4 of Tender.
2.	Quantity of stores	:	As per Chapter-3 Schedule of Requirements
3.	EMD / BID SECURING DECLARATION CERTIFICATE	:	The bidders are required to sign a Bid securing declaration as per Appendix-10, accepting that if they withdraw or modify their bid during the period of validity, or if they are awarded the contract and they fail to sign the contract or to submit a performance security before the deadline defined in the request of bids document, they will be debarred for the period of 02 years from the procuring entities procurements i.e. Govt. of India and name of the firm will be removed from the list of registered vendors.
4.	Date of Issue / Publishing		30.08.2025
5.	Document Download Start Date		30.08.2025
6.	Document Download End Date & Time		19.09.2025 at 1700 hours
7.	Date and time of pre bid meeting		NA
8.	Bid submission start date		30.08.2025
9.	Last Date and Time for uploading of Bids by		19.09.2025 at 1700 hours
10.	Date and Time of opening of Bids on		20.09.2025 at 0900 hours
11.	Mode of depositing the bids	:	Online through e-Procurement System at https://chandigarh.gov.in
12.	Mode of Tender	:	e-tender
13.	Tender Cost (Non refundable)	:	Nil
14.	Validity of offer/bid.	:	180 days from the date of opening of Tender i.e. 20.09.2025
15.	Price format	:	As per clause 6.1
16.	(a) Inspecting Authority		Designated Committee of Chandigarh Police.
	(b) Inspection methodology		Will be carried out as per details at Clause-5 of Chapter-5
17.	Delivery Period		As per Chapter-5
18.	Address of Delivery		Free delivery at consignee's premises i.e. Office of SP (Communication), UT Police Headquarter, Sector 9-D, Chandigarh-160009
19.	Period of Guarantee/ Warranty	:	03 years from the date of successful installation/commissioning of Equipment and training to the entire satisfaction of Consignees.

20.	After sale service support/CAMC		Supplier shall undertake to enter in to CAMC with spares. Refer to the point no. 6.1 (part B) of payment schedule.
21.	User License for required software under the tender	:	User license should be in favour of respective organizations i.e. Director General of Police, Chandigarh Police, UT Police Headquarter, Sector 9-D, Chandigarh-160009
22.	This tender is		Not transferrable.
23.	Proprietary and confidentiality of tender Document		As per the Appendix-27
24.	Purchaser		Director General of Police, Chandigarh Police, UT Police Headquarter, Sector 9D, Chandigarh-160009 .

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Sd-
SP (Communication)
Chandigarh Police

CHAPTER – 1

IMPORTANT INSTRUCTIONS TO BIDDERS

1 General:

- 1.1. Chandigarh Police, invites Online Tender from eligible bidders (Manufacturers/JV/authorized distributors) for Design, Supply, Installation and commissioning of stores for Open Standard Digital Trunking Radio System (OS-DTRS) for Chandigarh Police Radio Communication network of entire Chandigarh (hereinafter referred to interchangeably as the "Open Standard Digital Trunking Radio System" or the "System" or the "Equipment") as specified in Schedule of Requirement (Chapter-3) and Technical Specifications (Chapter-4) in this document on behalf of the President of India.
- 1.2. **Availability of Tender Documents:** The complete tender document shall be placed on the e-procurement web portal on eProcurement System at <https://chandigarh.gov.in> and Chandigarh Police website www.Chandigarhpolice.gov.in.
- 1.3. **Submission of Proposal/Bid:** Bidder shall submit their proposal/bid on Portal eProcurement System at <https://chandigarh.gov.in>. Proposal submitted through any other means will not be considered.
- 1.4. The Bidders are advised to study the tender document thoroughly. Submission of tender shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications.
- 1.5. **Pre-bid meeting/clarifications:** A pre-bid meeting will be conducted as per details mentioned in the NIT to clarify doubts of potential bidders in respect of the procurement. Prospective bidders/firms can attend the pre bid meeting on due date and time. Pre bid query if any can be e-mailed within stipulated time clearly specifying clause, existing provision, enquiry in respect of existing clause at email address: dspcomn-chd@nic.in. **Bid should be submitted only after the Pre Bid Meeting (PBM) and uploading the pre-bid reply** so as to take care of the changes made in bidding document. The changes made to the bidding document subsequent to the PBM shall be treated as amended to the bidding document and the same also be hosted on CPP portal and Chandigarh Police website.
- 1.6. **Changes in the bidding document:** At any time, prior to the deadline for submission of bids, department may for any reason, whether on its own initiative or as a result of a request for clarification by the bidder, modify the bidding documents by issuing an addendum. Copy of such addendums will be available for download at e-procurement web portal on eProcurement System at <https://chandigarh.gov.in> without any additional cost. **Any bidder, who has submitted his bid in response to the original invitation, shall have the opportunity to modify or re-submit it as the case may be within the period of time originally allotted or such extended time as may be allowed for submission of bids, when changes are made to the bidding document by the Department.**
- 1.7. Bidders shall not be permitted to alter or modify their bids after expiry of the deadline for receipt of bids.
- 1.8. **Earnest Money/Bid Securing Declaration Certificate:** Hard copy of Bid Security Declaration Certificate should be deposited **offline** directly to **Office of DGP UT, Chandigarh-160009 on or before 19.08.2025 at 17:00 Hrs and scanned copy of the same should be uploaded along with other tender documents failing which their offer will be summarily rejected.**
- 1.9. It will be imperative on each bidder to fully acquaint himself with all the local conditions and factors which would have any effect on the performance of the contract and cost of the Stores. No request for the change of price or delivery schedule shall be entertained, on account of any local condition or factor once the offer is accepted by the Purchaser.
- 1.10. The purchase committee reserves the right to relax any tender term/ condition in larger public interest with the approval of the competent authority.

2. Definitions:

- i. **Purchaser:** "Purchaser" shall mean the President of India acting through Director General of Police,

Chandigarh Police, UT Police Headquarter, Sector 9-D, Chandigarh-160009 and also includes her successors in office and assignees.

- ii. **Contract:** "Contract," means the invitation to Tender, instructions to Bidder, Tender, agreement/acceptance of Tender particular.
- iii. **Bidder:** "Bidder" shall mean the one who has signed the Bid Form. The Bidder may be either an Indian Company/Original Equipment Manufacturers (OEM) or leading partner in the JV or authorized distributors qualifying the eligibility criteria mentioned at Clause-5, 6 & 7 of Chapter-1 below.

2.1 For Make in India (Purchase preference)-

The brief of Public Procurement order 2017 (Preference to Make in India) issued by Ministry of Commerce & Industry dated 15.6.2017 and subsequent revision issued by Ministry of Commerce and Industry vide order dated 28.05.2018, 29.05.2019, 04.06.2020, 16.09.2020 and latest clarification issued, and Notification of Ministry of Communication dated 29.08.2018 to be followed as under:-

2.1.1) **Purchase preference** – The ‘**Class-I local supplier**’ will get purchase preference over ‘**Class-II Local Supplier**’ as well as **non local supplier** as per following procedure:-

- (i) Among all qualified bids, the lowest bid will be termed as L-1. If L-1 is ‘Class-I local supplier’, the contract will be awarded to L-1.
- (ii) If L-1 is not ‘Class-I local supplier’, the lowest bidder among the ‘Class-I local supplier’, will be invited to match the L-1 price subject to Class-I local supplier’s quoted price falling within the margin of purchase preference, and the contract shall be awarded to such ‘Class-I local supplier’ subject to matching the L-1 price.
- (iii) In case such lowest eligible ‘Class-I local supplier’ fails to match the L-1 price, the ‘Class-I local supplier’ with the next higher bid within the margin of purchase preference shall be invited to match the L-1 price and so on and contract shall be awarded accordingly. In case none of the ‘Class-I local supplier’ within the margin of purchase preference matches the L-1 price, the contract may be awarded to the L-1 bidder.

2.1.2) “**Class-II local supplier**” will not get purchase preference in any procurement, undertaken by procuring entities

2.2 **Minimum local content** : Local content means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent. The local content requirement to categorize a supplier as ‘Class-I local supplier’ / Class-II local supplier’ / Non- local supplier’ shall be defined as under:-

- (a) “Class-I local supplier” means a supplier or service provider, whose goods, services or works offered for procurement, has local content minimum 50%, as defined under this order.
- (b) “Class-II local supplier” means a supplier of service provider, whose goods, services or works offered for procurement, has local content minimum 20% but less than 50%, as defined under this order.

The bidders offering imported products will fall under the category of Non-local suppliers. They can’t claim themselves as Class-I local suppliers/class-II local suppliers by claiming

the services such as transportation, insurance, installation, commissioning, training and after sales service support like AMC/CAMC etc as local value addition. Non-Local Supplier” means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than 20%, as defined under this order.

- 2.2.1) The Department of Telecommunication has prepared a list of telecom products, services and works for purchase preference from local suppliers for public procurement vide Notification of Ministry of Communication dated 29.08.2018.

2.3 Margin of Purchase Preference: The margin of purchase preference shall be **20%**.

2.4 Verification of local content

- (i) The Class-I local supplier’ / ‘Class-II local supplier at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for ‘Class-I local supplier’/ ‘Class-II local supplier’, as the case may be. They shall also give details of the location (s) at which the local value addition is made.
- (ii) The ‘Class-I local supplier’/ ‘Class-II local supplier’ shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
- (iii) False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the general financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.
- (iv) A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities.
- (v) In respect of procuring entities other than the one which has carried out the debarment, the debarment takes effect prospectively from the date of uploading on the website(s) in the such a manner that ongoing procurements are not disrupted.

3. **EARNEST MONEY DEPOSIT(EMD)/ Bid Security Declaration Certificate:**

- (i) The scanned copy of Bid Security Deposit (Earnest Money) amount of Rs. 60,00,000/- (Sixty Lac) in the form of Account Payee Demand Draft, Fixed Deposit, banker's Cheque or Bank Guarantee from any of the commercial banks, in favour of DGP, UT Chandigarh or through online. The original DD/Pay Order/Banker's Cheque or Bank Guarantee shall be submitted by the bidder along with the bid document. Failure to do so will result in rejection of the bid. Registered MSMEs/MSEs with Government of India are exempted from Earnest Money Deposit on the condition that they submit the relevant certificate.
- (ii) The bidders are required to sign a Bid securing declaration as per Appendix-10, accepting that if they withdraw or modify their bid during the period of validity, or if they are awarded the contract and they fail to sign the contract, or to submit a performance security before the deadline defined in the request of bids document, they will be suspended for the period of 02 years from being eligible to submit bid for contracts with the procuring entity i.e. Chandigarh Police.
- (iii) Bid Securing Declaration Certificate should be in the name of Director General of Police, Chandigarh Police, UT Police Headquarter, Sector 9D, Chandigarh-160009 as per format at Appendix-10 of OTE.
- (iv) Original documents and EMD should be deposited in Tender Box no.04 at Ground Floor of , UT Police Headquarter, Sector 9D, Chandigarh-160009 on or before 19.09.2025 at 05 PM and scanned copy of the same should be uploaded along with other tender documents failing which their offer will be summarily rejected.
- (v) Any tender received from firm which is not accompanied with required Bid Securing Declaration Certificate in prescribed form, is liable to be rejected. Registration with any other authority will not exempt the firm from depositing the Bid Securing Declaration Certificate.
- (vi) Public Sector Undertaking/State undertaking or Central/State owned companies are not exempted from the deposition of the Bid Securing Declaration Certificate.

4 **Terms and conditions of Tendering Firms:**

- 4.1 Printed terms and conditions of the Bidders shall not be considered as forming part of their Bids.
- 4.2 Bidder must state categorically whether or not his offer conforms to all the tender terms and conditions. If there is a variation in any of the terms and conditions, the extent of variation and the reasons thereof shall be clearly mentioned in the technical bid.
- 4.3 Bidder must state categorically whether or not his offer conforms to the Schedule of Requirement (**Chapter-3**) and Technical Specifications (**Chapter 4**) of the tender.

5 **Eligibility condition:-**

The bids will be scrutinized to determine whether they are complete and meet the essential and important requirements, conditions etc. as prescribed in the Tender documents. The bids which do not meet the basic requirements, will be treated as non-responsive and will be summarily rejected. Tender shall be declared **non-responsive** and will be summarily **rejected on the following grounds;**

- i. Tender is unsigned or not signed by the authorized person.
- ii. Tender validity is shorter than required period.
- iii. If the Bidder quote price in the Technical bid.
- iv. Bid security declaration certificate have not been provided before tender opening.
- v. Bidder has quoted for goods manufactured by other manufacturer (s) without manufacturer(s)

- Authorization. Bidders (Principal/Manufacturer) cannot submit more than one bid/offer through more than one sole Agent/ distributor.
- vi. Goods/equipments offered are not meeting the tender enquiry specification.
 - vii. Bidder has not agreed to other essential condition(s) especially incorporated in the tender enquiry like terms of payments, liquidated damages clause, warranty clause.
 - viii. Poor/unsatisfactory past performance.
 - ix. Bidders who stand de-registered by banned/blacklisted by any government authority or any criminal case registered against them or their partners in case of JV.
 - x. If the Bidder does not submit duly signed Appendix 27
 - xi. If the Bidder does not agree to the delivery period as mentioned.
 - xiv. The Bidder in any manner discloses directly or indirectly the price bid in the Technical Bid.

6. Tender Evaluation Process/Methodology of opening of Bids: Evaluation will be carried out as stated below:

6.1 Stage –I: Pre-Qualification Bid Evaluation: The Bids which comply against Clause 6.2 & 6.3 will be taken up for Stage –I evaluation. The bidder shall furnish/upload the **scanned copy** of details and requisite certificates/documents regarding its eligibility in the prescribed format.

- a. Evaluation will be carried out for the compliance against the pre-qualification criteria.
- b. The entire documentary proof shall be legible & readable otherwise the document may not be considered for evaluation.
- c. No content in the documentary proofs should be scored/ shaded/deleted/ erased otherwise the document may not be considered for evaluation.

Bidders are advised to upload two separate envelopes for technical evaluation (pre-qualification and technical evaluation) on e-Procurement System at <https://chandigarh.gov.in>

6.2 Pre-Qualification Eligibility criteria for Bidders:

All correspondence should be made only with tender inviting authority. The invitation to tender is open to all eligible bidders who meet **eligibility criteria** as under:-

- a. The bidder should be Indian Company. Copy of certificate of incorporation and name change certificate (if any) should be submitted. In case of authorized distributors, the bidders shall submit the ink signed copy of authorization from the OEM and providing support for entire period of 10 years of the contract.
- b. In case of authorized distributor, Authorization certificate from OEM should be enclosed with the Technical Bid as per format at Appendix- 18 of tender enquiry.
- c. Offer from OEM or their authorized distributor will only be considered without any Intermediary Agency/Firm between OEM and distributor. Offer received from intermediary firm will be summarily rejected.
- d. Authorized distributor on behalf of the OEM or the OEM itself can bid but both cannot bid simultaneously.
- e. In case offers are received both from manufacturers as well as from their authorized distributor, Offers from Manufacturers only shall be considered and offers from their distributor shall be summarily **rejected**.
- f. An authorized distributor can submit single bid on behalf of single OEM only.
- g. The bidder should be a corporate in India registered under the Company Act, 1956 or a statutory body owned by Central/State Government.

- h. Bidders should submit the tender specific authorization certificate from OEM along with valid Dealer Possession License from WPC. Without these documents, tender will be considered invalid.
- i. The Bidder must have at least one Technical support centre(s) in India, preferably in Chandigarh for service warranty, repair and maintenance support after sales. Bidders must furnish the detail of available service centers. Chandigarh Police reserves the right to inspect the service centre prior to price bid opening.
- j. Bidder should provide an undertaking/affidavit towards support from the OEM for essential spares after sales support of the offered product for a period of 10 years at least.
- k. Bidder have to submit scanned copy of the valid certificate of enlistment from the Central Purchase Organization (eg. GEM/NSIC/MSME etc. for wireless equipments) or any Govt. organization.
- l. All the bidders participating in the tender must submit a scanned list of their owners, partners, etc. and a certificate to the effect that the firm is neither blacklisted by any Government Department nor any Criminal Case is registered against the firm or its owner or partners or directors anywhere in India.
- m. The OEM should own the intellectual properties rights for the software involved in the project. Self-declaration on IP rights should be submitted along with the technical bid.

6.3 Qualification Criteria (Bidder to submit supporting documents to establish the following criteria)

- a. The Bidder should have average annual turnover of **Rs. 30 Crores** during the period of last 3 years i.e. 2022-23, 2023-24 & 2024-25 to meet the obligation under contract. Bidder should submit audited Balance Sheet and profit & loss account for last **03 years**, duly authenticated by a Chartered Accountant/ Cost Accountant in India.
- b. The OEM should have average annual turnover of **Rs. 80 Crores** during the period of last 3 years i.e. 2022-23, 2023-24 & 2024-25 to meet the obligation under contract. Bidder should submit audited Balance Sheet and profit & loss account for last **03 years**, duly authenticated by a Chartered Accountant/ Cost Accountant in India and bank's report for their credit worthiness.
- c. Bidder Firm should not have suffered any financial loss during the last three years i.e. 2022-23, 2023-24 & 2025-25
- d. The Bidder/their affiliate company/authorized dealer/OEM must have successfully established minimum one solution of similar nature (Radio Trunking System) which includes installation and successful implementation of such system in India in last 05 years. The bidder must provide documentary proof in this regard along with the technical bid.
- e. The net worth of the bidder firm (manufacturer or principal of authorized representative) should not be negative on closing day of last financial year and should not have eroded by more than 30% (Thirty percent) in the last three years, ending on closing day of last financial year.
- f. In case of **Local Bidders** for the purpose of ongoing Make In India preference ,**Local Bidders** (manufacturers or principal of authorized representative) should have valid/approved '**Make in India** ' agreement /program and should meet all other criteria as mentioned above except sub criteria 7(c) in experience and past performance above, would also be considered to be qualified provided :
 - (i) **Their foreign** "Make-in-India" associates meet all the criteria above without exemption.

- (ii) The bidder submits appropriate documentary proof for a valid /approved ongoing “make-In – India” agreement /Program.
- (iii) The Bidder (manufacturer or principal of authorized representative) furnishes along with the bid a legally enforceable undertaking jointly executed by himself and such foreign manufacturer for satisfactory manufacture, Supply (and erection / commissioning if applicable)and performance of ‘**the product**’ offered including all warranty obligations as per the general and special conditions of this Tender Enquiry.

6.4 Stage-II - Technical Bid Evaluation: Only those Bids which comply against Stage – I (Pre-Qualification Evaluation) will be taken up for Stage-II evaluation as below:

- a. Evaluation will be carried out based on the Technical Evaluation Criteria mentioned below. The Technical Bid will be evaluated based on the compliances filled up in the Technical bid and also all the terms and conditions of the tender. The tenders that do not confirm to the tender conditions and tenders from firms without adequate capabilities for execution of the work as per tender requirements shall be liable for rejection.
- b. The bidder shall also submit the **scanned copy of** Bill of Material as per Schedule of Requirement (**Chapter-3**) clearly giving the country of manufacture, nomenclature, make, model no. & quantities to be supplied for Open Standard Digital Trunking Radio System under this Contract. It shall be **uploaded** with the Technical Bid.
- c. Bidders shall indicate complete specifications and all features of the proposed system. The legible scanned copy of technical specifications alongwith literature/ brochures of quoted system must be attached with the technical bid by the bidder. The Bidder shall also provide, Equipment Data Sheets, and conformance chart for Technical Specifications etc.
- d. The bidder is required to submit all the required technical documents in the tender itself mentioning page number of respective document. Technicalevaluation will be carried out only after verification of the following technical documents: _

Srl. No.	Document Name	Page no.
1.	MTCTE (mandatory testing and certification of telecom Equipment certification). Bidder must have MTCTE certificate as per Indian Telegraph(Amendment) Rules 2017 MTCTE Portal (https://www.mtcte.tec.gov.in)	
2.	License for the equipment (i.e for Digital Trunk RadioSystem, 400/800 MHz Radio sets and Microwave link).	
3.	Team responsible for Project Management upto completion of the project	
4.	Communication networking and Electrical layout at the base station sites (to be submitted separately for each base station site, control centre and dispatch centers).	
5.	Microwave network layout with redundant configuration for backhaul to reach the controlcentre.	
6.	Proposed switching centre layout	
7.	Tower design with appropriate load considerations to withstand maximum wind speed of 150Kmph as per specifications	
8.	Path profile diagrams for microwave links	
9.	Link budget calculations for microwave links.	
10.	Link budget calculations for the proposed Digital Trunk Radio System (should be submittedfor each site separately)	
11.	Individual Coverage diagrams for each base station with -85 dbm signal strength indications	
12.	Combined expected coverage diagram with -85 dbm signal strengthindications	

13.	The proposed system design document specifying assessment of traffic requirement as per Appendix-5 and other operational requirement of Chandigarh Police for 2250 concurrent radio and expandable to 4000 in future with detail of number of site and number of repeaters on each proposed sites for handling expected load.	
14.	Antenna system proposed for each base station	
15.	Azimuth and elevation of the antenna system for each base station	
16.	Surge and lightning protection system for each base station and control Centre. Protection should be provided for all the components in the project	
17.	Dispatch console configuration	
18.	Estimated duration to complete the project with detailed proposed schedule of work accompanied with Gantt Chart. Day one of project commencement may be counted from the day of issuance of purchase order. Also the PERT (Program Evaluation Review Technique) chart for the project should be submitted illustrating serial tasks and concurrent tasks.	
19.	Test Equipment to be provided for field test to measure the received signal strength during acceptance test procedure	
20.	List of critical spares to be provided with the bid and nature of faults that could occur (i.e. as to why it is considered as critical spare)	
21.	Base station configuration as per requirement	
22.	Power system configuration proposed for each base station location	
23.	Antenna system for microwave radio with azimuth and elevation details	
24.	Details of the software to be installed in the proposed system (networking management, Programming, any other software necessary).	
25.	Compliance statement for all technical specification with reference page number	
26.	Tender shall be declared non-responsive and will be summarily rejected on the following grounds; i) In case the bidder failed to specify number of sites required for signal coverage of complete Chandigarh as per Technical Specifications Chapter-4. ii) In case the bidder failed to specify Load per site in KWH and number of manpower required to maintain complete sites. iii) In case the bidder failed to specify number of frequency pair required for signal coverage and inter-site connectivity through secure microwave spectrum for complete Chandigarh. iv) In case the bidder failed to specify number of repeaters required at each site to support operation of 2250 radio currently and expandable for handling 4000 radios in future. v) The bandwidth of lease line connectivity other than Chandigarh Police sites listed at Appendix- 29 may also be mentioned as second level of redundancy to the sites.	

6.5 Technical field Evaluation: Only those Bids which fulfill Stage – I and stage – II will be taken up for Stage –III evaluation as below:

- a. The bidders shall arrange **presentation and live demonstration of the proposed System for the latest Open Standard Digital Trunking Radio System within 10 days of opening of the technical bids** to show that their proposed System fully conforms to this tender.
- b. The bidders are advised to make all necessary arrangement for the presentation and the live demonstration of their proposed system well in advance as they will be required to adhere to the time schedule.
- c. The bidder may offer to give a live demonstration on an existing operational system in **Open Standard Digital Trunking Radio System** in India. All logistics expenses for such demonstration including air travel will be borne by the bidder. Less than 10 members of Tender Evaluation

Committee (TEC) along with supporting technical staff will attend the demonstration.

- d. **The live demonstration of the proposed systems is a mandatory requirement to show conformity with the tender specifications and shall include the following:**
- i. Installation of at least two **Open Standard Digital Trunking Radio System** base radios (repeaters) per base station in 400/800 MHz band at any two proposed repeater sites.
 - ii. Installation of one Master Switching System for Field trial/survey/technical evaluation of the proposed **Open Standard Digital Trunking Radio System** in 400/800 MHz band.
 - iii. Establishment of microwave links as per proposed solution for Field trial/survey/technical evaluation between the two repeater sites.
 - iv. **Open Standard Digital Trunking Radio System** connectivity through LAN/Microwave/ Network with the facility of automatic changeover from microwave link to MPLS/VPN network seamlessly.
 - v. Field trial/survey/technical evaluation of installed **Open Standard Digital Trunking Radio System** base stations in standalone and wide area configuration using proposed at least five each Handheld, Static/mobile sets along with necessary accessories.
 - vi. All the technical parameters of the proposed **Open Standard Digital Trunking Radio System** and major components viz. NMT/NMS, Dispatcher Console etc specified in the tender shall be demonstrated using appropriate test equipment to be brought by the bidder for Field trial/survey/technical evaluation alternatively the bidder can arrange for Field trials/survey/technical evaluations at any installed and operational user location or any government lab at their own risk and on 'No cost, No commitment' basis.
 - vii. Management Information System (MIS)/ Historical reports.
 - viii. **Open Standard Digital Trunking Radio System** operational and management features and capabilities.
 - ix. Handheld, Static/mobile radio samples along with necessary accessories of the bidders will be tested among each other's system for the Field trial/survey/technical evaluation/IOP purpose.
 - x. Proposed Radio modals should have AES 256 encryption, Color Display, GPS, WIFI, Bluetooth such features and should be rugged as per MIL-STD-810 including Dust & Water Intrusion with IP68, IP66 protection, test reports/documents to be provided for technical evaluation purpose and above features to be demonstrated during field trial.
 - xi. Arrangements for Field trials/survey/technical evaluations for installed/proposed Digital Trunk Radio System shall be made at the cost of the bidder.
 - xii. The Bidder can demonstrate all above using their existing implementation of similar solution at other location.
 - xiii. Bidders will be provided with Space and raw power by the purchaser for Field trial/survey/technical evaluation only, any other items/equipments etc. required for Field trials/survey/technical evaluations of the proposed Digital Trunk Radio System shall be made by the bidder.
 - xiv. Testing with handheld/mobile set will be carried out in a high speed moving vehicle to check hand off feature. There should not be any interruption in ongoing communication.
 - xv. Any other features/ capabilities bidder want to demonstrate.

7 Requirement of Registration as per Order (Public Procurement No. 1) dated 23.07.2020

Any bidder from country which shares a land border with India is eligible to bid if, the bidder is registered with competent authority as specified in Order (Public Procurement No.1) vide F.No.6/18/2019-PPD dated 23rd July, 2020 or any amendment thereto. **A Certificate** will be submitted by the bidder along with the bid regarding their compliance as applicable to the said order. If such certificate given by bidder whose bid is accepted is found to be false, this would be ground for immediate termination and further legal action in accordance with law.

8 Bid Requirements:

8.1 The Bidders are required to bid for entire quantity as specified in schedule of requirements at Chapter-3 of Open Tender Enquiry. Bidders are also advised to visit and examine the site and its surroundings to familiarize him of the existing network facility and environment and shall collect all other information which may require for preparing and submitting the Bid and entering into the contract. Claims and objections due to ignorance of existing conditions or inadequacy of information will not be considered after submission of Bid and during implementation. Bidders desired to have site visit may seek due permission from Director General of Police, Chandigarh Police, UT Police Headquarter, Sector 9D, Chandigarh-160009 in this regard.

8.2 Conditional bids, Telex/Fax bids and incomplete bids will be summarily rejected. Only online bids will be accepted and no physical bids will be accepted.

8.3 The bid shall contain no interlineations, erasures or overwriting on scanned copy of submitted document and all pages of the Bid must be signed and sequentially numbered by the Bidder.

8.4 The bidder shall ensure that all columns relevant to the bidder of price schedule for completion of the project as per Bill of Quantity and specifications are completely and properly filled. The price bid shall not be considered and bid shall be summarily **rejected, if the price schedule is not properly filled.** No clarification whatsoever shall be entertained after opening of the price bid.

8.5 Price bid Evaluation Criteria & Price Bid issues:-

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

- a. Only those Bids will be evaluated which are found to be fulfilling all the eligibility and qualifying requirements of the Tender documents and are acceptable both technically and commercially (called substantially responsive bid).
- b. The technical Bids forwarded by the Bidders will be evaluated by the Buyer with reference to the technical characteristics of the equipment as mentioned in the Tender enquiry. The compliance of Technical Bids would be determined on the basis of the parameters specified in the tender document. The Price Bids of only those Bidders will be opened whose Technical Bids would clear the technical evaluation.
- c. The bidders are required to bid for entire quantity as per Schedule of Requirement of Chapter-3. The lowest bid will be decided upon the lowest price quoted by the bidder as on the date of opening of Price bid. The Lowest price (L-1) will be decided on the basis of price quoted by the particular bidder inclusive of all applicable levies/duties/taxes/agency commission etc. for delivery of stores at destination i.e (Consignee's Location) and rates quoted for 7 years Annual Maintenance Contract in price bid after warranty period. The Buyer will evaluate the offers received by adopting Discounted Cash Flow method.
- d. **Purchase/Price preference:**
The Purchase preference shall be given to Local Supplier in consonance with Revised Public Procurement Order (Preference to Make-in –India), Order 2017 dated 16.09.2020 and latest clarification issued in manner specified above at clause 2.1 of Chapter- 1.
- e. Tender document is non-transferable.

9. Complete tender documents along with supporting documents as called for in the tender conditions should be duly filled (wherever necessary), signed in and scanned copy of the same should be uploaded in the online mode for considering any offer as complete offer. All the bidders are expected to go through every detail of the tender, provide all requisite details and documents / certificate, and tender documents duly complete in all respect and digitally signed and upload the required bid documents one by

one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.

10. The conditions of contract, which will govern any contract made or entered into as a result of this tender process shall be as per the following guidelines—
 - i. GFR-2017
 - ii. Manual for Procurement of Goods-2017
 - iii. Revised Public procurement (Preference to Make in India) Order 2017 dated 16.09.2020 and latest clarification issued.
 - iv. Any General and special conditions attached to this invitation to tender will also form part of the Conditions.
11. Firms registered with NSIC may be required to undergo re-verification of their manufacturing capacity through Inspecting Agencies before considering placement of contract. In case of denial by the firm for re-verification, the firm will be disqualified for this tender.
12. Chandigarh Police reserves the right to cancel/reject any or all the bids without assigning any reason.
13. **The payments to the supplier may be made through Electronic Fund Transfer (EFT) into their designated bank accounts. Scanned copy of the bank Account Number with the branch Code of the Bidder** and mandate form duly filled in all respect may be uploaded with the technical bid.
14. Suo muto discounts and rebates offered by the bidder after opening of the financial bid shall not be considered for the purpose of ranking the financial offer. However, if such a firm does become L1 at its original offer, such Suo muto rebates can be incorporated in the contracts. This also applies to conditional rebates, for example, rebate for faster payments, and so on.
15. **PRICE :-**

The prices quoted should be on firm & fixed basis include all elements of prices and should be quoted in Indian Rupees only. The bidders / bids will not be allowed to make any variations in the price bid or any amendments to commercial offers already uploaded online during the currency of tender and after the date of opening of the tender. The bidders are expected to indicate their price bids in clear and unambiguous manner – both in words and figures and the offer should not contain any cuttings or over writings or interpolations. The purchaser shall reserve the right to reject the commercial / price bid, which will have cuttings or over writings. In case there is a discrepancy between the words and figures, the prices indicated in words shall prevail. PRICE BID to be submitted Online only as per format provided in excel sheet on e-Procurement System at <https://chandigarh.gov.in>

- i. The bidders shall pay all taxes, duties and levies, lawfully assessed against the Purchaser or the bidders in pursuance of the contract.
- ii. All the duties and taxes paid by the Supplier in India will be reimbursed as per actual. No claim, on account of increase in cost of the raw materials due to increase in taxes or duties, will be entertained.
- iii. The bidders should indicate duties and taxes in the performa as applicable on the date of opening of Financial Bids. However, reimbursement towards duties and taxes shall be made as per actual and statutory variations in taxes and duties shall be allowed during the original delivery period as

agreed in terms of the contract. The purchaser shall get the benefit in duties and taxes get reduced and pay extra if they increased. However, the variations shall not apply to any duties or taxes on the raw material.

- iv. The purchaser will not be liable to any claim on account of fresh imposition and / or increase of statutory duties or taxes on the raw material and / or components used directly in the manufacturer of the contracted stores taking place during the pendency of the contract.
- v. If the purchaser is required by Indian Law to deduct or withhold any other taxes or other amounts, the gross amount payable by purchaser shall be paid after making such deductions or other withholdings. Necessary certificate regarding the deductions so made will be issued by the purchaser.

If the purchaser finds the duties and taxes are mentioned incorrectly, the purchaser reserves the right to change it to the values considered appropriate and the price quoted by the bidders shall be adjusted accordingly. If the purchaser feels that duties were mentioned incorrectly to gain unfair advantage, the bidders shall be liable to be rejected.

16 Submission of Proposal/Bid:

16.1 Availability of Tender Documents: The complete tender document shall be placed on the e-procurement web portal on eProcurement System at <https://chandigarh.gov.in> and Chandigarh Police website www.Chandigarhpolice.gov.in.

16.2 SYSTEM OF BIDDING: SINGLE STAGE IN TWO COVER SYSTEM

It is proposed to have a **Two-Cover System** for this tender. Bidder shall submit their proposal/bid on eProcurement System at <https://chandigarh.gov.in>. The website also has user manuals with detailed guideline on enrolment and participation in the online bidding process. No conditional bid shall be allowed/ accepted. Proposal/bid submitted through any other means will not be considered.

- a. Technical Bid shall be uploaded in “**pdf**” format only.
- b. Commercial Bid shall be uploaded in “**excel/ spreadsheet**” format provided with the tender document on the website of eProcurement System at <https://chandigarh.gov.in>
- c. All pages of tender should be number and index. Bidders will have to upload scanned copies of various documents required for eligibility and all other documents as specified in TE, techno-commercial bid in cover-I, and price bid in cover-II

16.3 TECHNICAL BID (first cover) should comprise **scanned copy** of the following document along with Checklist with proper indexing and page No.

- i. All Appendix- 1 to 28 along with supporting documents as called for in the tender conditions duly filled wherever necessary. All these appendices should be signed by authorized person to do so with authority letter.
- ii. Bid Securing Declaration Certificate in the prescribed format only. (**ORIGINAL CERTIFICATE BE SENT OFFLINE**)
- iii. Copy of NSIC registration certificate wherever applicable duly countersigned and authenticated.
- iv. Copy of PAN Number, GST registration and latest deposit challan of GST.
- v. True Copies of registration as Proprietorship, Partnership, Private, JV agreement or Public Limited Holdings (wherever applicable)
- vi. Warranty / guarantee confirmation certificate.
- vii. Details of bankers along with bank account, IFSC code and other details required for electronic transfers of payment
- viii. Past performance details along with copies of orders / contracts awarded to the bidder.
- ix. OEM certificates/authorization and enlistment certificates.

- x. Valid DPL from WPC for proposed equipments.
- xi. Technical detail/ leaflets/ brochure / compliance statement on specifications of subject stores to confirm on the qualitative requirements. The bidders will be required to specifically mention the availability of detail literature on each specification / QRs in the brochure or technical literature provided by the suppliers. Clause wise technical compliance shall be submitted with comment on deviations, if any.
- xii. Test certificate of the equipment from the Chamber of commerce of country /manufacture. (if any)
- xiii. Any other relevant document / certificate which is required to be submitted by the firm in line with the requirement of the subject tender enquiry.
- xiv. The proposed system design document specifying traffic requirement assessment as per **Appendix-5** for 2250 concurrent radio and expandable to 4000 in future with detail of number of site and number of repeaters on each proposed sites for handling expected load.
- xv. To submit the scanned copy of Bill of Material as per Schedule of Requirement (Chapter-3) clearly giving the country of manufacture, nomenclature, make, model number & quantities to be supplied for Open Standard Digital Trunking Radio System (Clause 6.4 (b), Chapter-1)
- xvi. Undertaking that there are no government restrictions in the country of the supplier or countries from which sub-components are being procured and / or export of any part of the system being supplied (Clause 26, Chapter-1)

COMMERCIAL/PRICE BID (second cover): Price should be quoted in second cover online only in prescribed format as per Excel sheet attached with tender on e-Procurement System at <https://chandigarh.gov.in>

16.4 Price bid in Excel format should only be uploaded in 2nd cover. If bidder uploads price bid with technical bids/literature, the bid will be rejected. The quoted rates must be valid for a period of 180 days from the date of opening of tender. The overall offer for the assignment and bidder(s) quoted price shall remain unchanged during the period of validity. If the bidder quoted the validity shorter than the required period, the same will be treated as unresponsive and it may be rejected. In case the bidders withdraws, modifies or change his offer during the validity period, bid is liable to be rejected and they will be suspended for the period of 02 years from being eligible to submit bid for contracts with the procuring entity i.e. Chandigarh Police without assigning any reasons thereof. The bidders should also be ready to extend the validity, if required, without changing any terms, condition etc. of their original tender.

16.5 PRICE BID should comprise of the following:-

- i) As regards price(s) for all items/ services/ equipment's (as mentioned in Price Bid Format) shall be quoted in **Indian Rupees** only.
- ii) Bids where prices are quoted in any other way shall be treated as non-responsive and rejected.
- iii) Price bid should also be uploaded online as per BOQ template.
- iv) There should be no over writing or cuttings or any interpolations in price(s) while uploading scanned copy online.

17 INSTRUCTIONS FOR ONLINE BID SUBMISSION: - Instructions to the Bidders to submit the bids online through the Central Public Procurement Portal for e-Procurement are at e-Procurement System at <https://chandigarh.gov.in>. The bidders must carefully follow the instructions:-

- i. Possession of valid Digital Signature Certificate (DSC) and enrolment/registration of the contractors/bidders on the e-procurement/e-tender portal is a prerequisite for e-tendering.
- ii. Bidder should do the enrolment in the e-Procurement site using the "Click here to Enroll" option available on the home page. Portal enrolment is generally free of charge. During enrolment/registration, the bidders should provide the correct/true information including valid email-id. All the correspondence shall be made directly with the contractors/bidders through e-mail id provided.

- iii. Bidder need to login to the site through their user ID/ password chosen during enrolment/registration. Then the Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by NIC ,SIFY/TCS/nCode/eMudra or any Certifying Authority recognized by CCA India on eToken / Smart Card, should be registered.
- iv. The DSC that is registered only should be used by the bidder and should ensure safety of the same.
- v. Contractor/Bidder may go through the bids published on the site and download the required tender documents/ Annexure for the bids he/she is interested.
- vi. After downloading / getting the tender document/ Annexures/ Appendices, the Bidder should go through them carefully and then submit the documents as asked, otherwise bid will be rejected.
- vii. If there are any clarifications, this may be obtained online through the tender site, or through the contact details. Bidder should take into account the corrigendum published before submitting the bids online.
- viii. Bidder then logs in to the site through the secured log in by giving the user id/ password chosen during enrolment/registration and then by giving the password of the e-Token/ Smart Card to access DSC.
- ix. Bidder selects the tender which he/she is interested in by using the search option & then moves it to the 'my bids' folder.
- x. From my tender folder, he selects the tender to view all the details indicated.
- xi. It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidder should go through the tender Annexures and appendices carefully and upload the documents as asked; otherwise, the bid will be rejected.
- xii. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/ Annexure and generally, they can be in pdf / xls/ rar formats. If there is more than one document, they can be clubbed together and can be provided in the requested format. Each document to be uploaded through online for the bids should be less than 2 MB. If any document is more than 2 MB, it can be reduced through zip/ rar and the same can be uploaded, if permitted. Bidders Bid documents may be scanned with 100 dpi with black and white option. However, if the file size is less than 1 MB the transaction uploading time will be very fast.
- xiii. Bidder should take into account the corrigendum published from time to time before submitting the online bids.
- xiv. The Bidders can update well in advance, the documents such as certificates, annual report details etc., under My Space option and these can be selected as per tender requirements and then send along with bid documents during bid submission. This will facilitate the bid submission process faster by reducing upload time of bids.
- xv. Bidder should submit the EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission due date & time for the tender. Scanned copy of the instrument should be uploaded as part of the offer.
- xvi. While submitting the bids online, the bidder reads the terms & conditions and accepts the same to proceed further to submit the bid packets.
- xvii. The bidder has to select the payment option as offline to pay the EMD as applicable and enter details.

- xviii. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise submitted bid will not be acceptable.
- xix. The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.
- xx. The bidder has to upload the relevant files required as indicated in the covered content. In case of any irrelevant files, the bid will be rejected.
- xxi. If the price bid format is provided in a spread sheet file like BoQ_xxxx.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Price Bid/ BOQ template must not be modified/replaced by the bidder, else the bid submitted is liable to be rejected for this tender.
- xxii. The bidders are requested to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.
- xxiii. After the bid submission (i.e. after Clicking "Freeze Bid Submission" in the portal), the acknowledgement number, given by the system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and will also act as an entry pass to participate in the bid opening date.
- xxiv. The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
- xxv. All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission & not be viewable by any one until the time of bid opening.
- xxvi. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- xxvii. The confidentiality of the bids is maintained since the secured Socket Layer 128 bit encryption technology is used. Data storage encryption of sensitive fields is done.
- xxviii. The bidder should logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the (X) exit option in the browser.

- xxix. For any queries regarding e-tendering process, the bidders are requested to contact as provided in the tender document. Parallely for any further queries, the bidders are asked to contact over phone: 0172-2760840 or send a mail over to dspcomn-chd@nic.in.
18. Any change in Address/ Telephone/ Fax/ e-mail should be immediately informed. The state of non communication by the firm will make the offer liable for rejection.
19. After evaluation of the bids and the live demonstration, the short-listed Bidders will be intimated. The list of short listed Bidders will also be posted on the website of eProcurement System at <https://chandigarh.gov.in/eprocure/app>. The decision of the committee on technical suitability of the offer shall be final and shall not be open for discussion.
20. The Commercial bids of the short-listed Bidders will be **opened on-line at Chandigarh** and such short-listed bidders will be intimated about the date and time accordingly. The short-listed bidders or their authorized representatives may remain present, if they so desire.
21. **Delivery of the Stores at Chandigarh Police premises shall be completed by the Supplier in** accordance with the terms specified by the Purchaser in Chapter-5.
22. **Purchaser's right to accept any bid and to reject any or all bids:** The Purchaser reserves the right to accept any bid, and to annul the bid process and reject all bids at any time, without assigning any reason, prior to placement of supply order/ signing of contract, without thereby incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the grounds for the Purchaser's action.
23. **Clarification regarding contents of the bids** – During the course of evaluation process, the purchasing authority, shall at its discretion, ask the bidder for clarifications or confirmation on various aspects with reference to shortcomings or deficiencies so noticed in their bids. The request for such clarification or confirmations shall be given in writing to which the bidder will be required to send in their response within the time frame so prescribed in such written communications. The clarifications / confirmations shall be called only in respect of general conditions or requirements of the tender enquiry documents and not on any aspect pertaining to specifications or prices or other essential requirements of tender schedule.
24. **Modifications and withdrawal of bids** –A bidder may modify or withdraw his bid online after submission but prior to final date of submission of bids/date of opening of bids. In case a supplier modifies or amends a bid already submitted online, the latest version of the bid will be considered. **No post bid clarification or alteration or modification on the initiative of the bidder will be entertained.**
25. **Government Regulations –**
- It shall also be confirmed by the Bidder that, there are no Government restrictions in the country of the supplier or countries from which sub-components are being procured and /or the export of any part of the system being supplied. Bidder shall provide certificate/undertaking to this effect.
26. **Legal constitution of firm :-** Any individual signing the tender (or holding digital signature certificate) shall specify whether signatory is signing as
- i) Sole proprietor;

- ii) Partner of the firm
- iii) Director/Secretary of company or authorized by board of Directors.

27. Payment authority – The payment authority will be the **DGP, Chandigarh Police.**

28. Compliance statement for specifications/QRs –

- i. The technical details of the models offered along with the supporting original technical Literature, leaflets, brochures etc. will be submitted. The confirmation of the models(s) offered with the Tender specification and the deviation(s), if any will be clearly mentioned in the technical bids.
 - ii. Bidders are required to furnish clause by clause compliance of specification bringing out clearly deviation from specification, if any. **The firms are advised to submit the compliance statement in the format given at Appendix-7 along with technical bid failing which their offer will be treated as incomplete and are liable to be ignored.**
- 29.** Bidder will be fully responsible for proper installation, commissioning and training and making the equipment functional before final settlement of the account.
- 30.** The Bidders will also provide complete technical/ operating and service manual of the equipment's.
- 31. The Bidders should ensure that the entire Bid Documents should have a continuous set of serial no. with proper index.**
- 32.** The decision of the purchaser shall be final as to the quality of the stores and shall be binding upon the Bidders and in case of any of the articles supplied not being found as per specification shall be liable to be rejected or replaced and any expenses or losses caused to the suppliers should be borne by the supplier and ensured by the supplier that articles supplied should be of standard specifications and free from all defects. The acceptance of articles will be made only when the articles are inspected and found up to the standard specifications and free from all defects. The rejected items must be removed by the Bidders from the consignee's premises within 15 days from the date of the information about rejection. **SP/Communication, UT Police, Chandigarh-160009** will take reasonable view of such materials but in no case shall be responsible for any loss, shortage, damage that may occur to it while it is in the premises of the consignees.
- 33.** For any change in terms and condition of tender / tender specification, the Bidders are requested to visit the Portal eProcurement System at <https://chandigarh.gov.in>.

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SP (Communication)
Chandigarh Police

CHAPTER – 2

GENERAL CONDITIONS OF TENDER ENQUIRY

1. **PACKING:** The supplier will ensure that the stores are securely packed to avoid damage in transit by sea/air/rail/road occasioned by any defect in packing and shipping documents should also show the name of the ultimate consignee. The supplier shall insert in each case packing list fully item-wise to show the case number, contents, gross and net weight and cubic measurement and dimensions. Four copies of each packing list shall be supplied to the Forwarding Agent.
2. **MARKING:** Each case shall have shipping marks stenciled on two opposite side and on the top. In addition, the gross weight/net weight and cubic measurements should also be indicated on the packages. The marks shall also be shown on invoices, packing lists and on rail/road Bills of lading or mailing certificates exactly as they appear on the cases.
3. **LEVIES:** The quoted price should be strictly as per **BOQ FORMAT** clearly indicating quantum of levies/duties and taxes with agency commission if any and no claim for the same at later stage will be entertained.
4. **INSURANCE:** Price offered by the bidder will be inclusive of all insurance charges payable till delivery of stores at consignee location, its installation and commissioning of the store. The Insurance shall be obtained by the supplier for coverage on an "All Risks" basis including war risk and strike. Comprehensive insurance cover for men, machinery and all parts shall be arranged by the firm for entire period of contract. The Cover Note of Insurance shall be in the name of "Chandigarh Police" only (Owner of the Project) and in case of any calamity, the claim shall be settled in favour of Chandigarh Police. The firm shall make his own arrangement to receive and store the material at site. The settlement of claims with the insurance company for any loss/damage occurring during transit and storage at works site shall entirely be the responsibility of the firm. Firm shall submit cover note regularly after renewal of the insurance.
Penalty for non renewal of insurance: The penalty amounting to Rs. 500/- per day will be imposed on the firm in the absence of insurance policies for men, machinery and all parts and shall be deducted from the respective annual CAMC payment.
5. **LIQUIDATED DAMAGES (LD):**
 - (i) If the contractor fails to deliver the stores and required services thereof within the period fixed for such delivery/services or at any time repudiates the contract before the expiring of such period the purchaser will recover from the contractor liquidity damages including administrative expenses and not by way of penalty a sum equivalent to 0.5 (Half)% of the price of any portion of stores and services delivered late, for each week or part thereof of delay provided that the total damages so claimed shall not exceed 10% of the total contract price.
 - (ii) While granting extension of the delivery period, where the delivery of stores and services thereof is accepted after the expiry of the original delivery period, the purchaser will recover from the contractor, as agreed, liquidity damages a sum equivalent to 0.5 (Half) % of the price of any portion of stores and services delivered late, for each week or part thereof of delay provided that the total damages so claimed shall not exceed 10% (Ten) of the value of delayed goods and services thereof.

- (iii) In case of any defects in supply or manufacturing or not conforming to technical specifications, observed during survey at consignee's locations or later during the warranty period, seller will be liable to replace the defective stores at their cost.
 - (iv) Any amount which becomes due and recoverable from the Contractor on account of liquidated damages relating to this contract shall also be recoverable from any sum that is due or any sum thereafter may become due to the contractor out of this contract or any valid contract with the Chandigarh Police.
 - (v) The PBG shall be en-cashed to the extent of LD amount, if the same is not paid within the time period specified in the notice for recovery of LD. Where the bank guarantees have been encashed partially, the contractor on such occasions shall restore the encashed guarantees to the full amount. Any failure to do so shall amount to violation of the terms and conditions of the project. Without prejudice to its rights of any other remedy, purchaser may en-cash Bank Guarantee (PBG) in case of any breach in terms and conditions of the project by the Contractor.
6. **DEFECTIVE STORES:** In case of any defects in supply or manufacturing or workmanship, observed during survey at consignee location or later during the warranty period, the bidders will be liable to replace the defective store at the cost of supplier. The purchase proceed to take remedial action as may be necessary at the supplier's risk and expense and without any prejudice to any other right which the purchase may have under the contract.
 7. **PERFORMANCE SECURITY:** Successful bidders will have to submit performance bond @ 5 % of contract value within 15 days of issue of Award of contract (A/T) for due performance of the contract valid beyond 180 days of warrantee/Guarantee period and CAMC obligations for 07 years after warranty period in shape of the Bank Guarantee in the required performa. The performance guarantee will come into force after the installation and commission. Firm, on their own will have to direct their bankers to extend the performance bond to be valid till warranty/guarantee period. The Performance Security Deposit furnished by the successful bidder(s) will be forfeited if they do not perform with respect to terms and condition of the contract.
 8. **PERFORMANCE STATEMENT:** Bidders should submit their performance statement in the enclosed performa at Appendix-9 of Tender Enquiry. The decision on the assessment of the past performance of the bidders by the purchaser is final. In case, it is found that information furnished is incomplete or incorrect, their tender will be liable to be ignored.
 9. **DISPUTE RESOLUTION:** When a dispute/difference arises, both the purchaser and supplier should first try to resolve it amicably by mutual consultation. If the parties fail to resolve the dispute then, depending on the position of the case, either the purchaser or supplier should give notice to the other party of its intention to commence arbitration. The following Arbitration clause will form part of the contract placed on successful Bidder.
 10. **ARBITRATION:**
 - a. In the event of any question, dispute or difference arising under these conditions of contract, or in connection with this contract (except as to any matters the decision of which is specifically provided for by these conditions or the special conditions), the same shall be referred to the sole arbitrator to be nominated by Legal department and will be appointed by the Home Secretary, Chandigarh Administration. There will be no objection that the arbitrator is a Government Servant that he had to deal with the matters to which the contract relates or that in the course of his duties as a Government servant he has expressed views on all or any of the matters in dispute or difference. The award of the

arbitrator shall be final and binding on the parties to this contract.

- b. In the event of the Arbitrator denying, neglecting or refusing to act or resigning or being unable to act for any reason, or his award being set aside by the court for any reason, shall be lawful for the Home Secretary, Chandigarh Administration to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid.
- c. It is further a term of this contract that no person other than the person appointed by the Home Secretary, Chandigarh Administration as aforesaid should act as arbitrator and that, if for any reason that is not possible, the matter is not to be referred to Arbitration at all.
- d. The arbitrator may from time to time with the consent of all the parties to the contract enlarge the time for making the award.
- e. Upon every such reference, the assessment of the costs incidental to the reference and award respectively shall be in the discretion of the arbitrator.
- f. Arbitration shall be held in Chandigarh, India or such other place as the Home Secretary at his discretion may determine and conducted in accordance with the provision of Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof. In this clause, the expression 'Home Secretary' includes if there be no Secretary or if Secretary is on leave or is absent from duty or is not available for any reason whatsoever, the officer who is looking after the current duties of Secretary whether in addition to other function or otherwise.
- g. Incase bidders do not agree to Arbitration clause as mentioned in the tender enquiry, they may opt for settlement through court in Chandigarh, India. Jurisdiction of the court as a result of this tender invitation will be the place from which the contract is issued i.e. Chandigarh.

11. PENALTY FOR USE OF UNDUE INFLUENCE:

The Seller should undertake that he has not given, offered or promised to give directly or indirectly any gift, consideration, reward, commission, fees brokerage or inducement to any person in service of the Purchaser or otherwise in procuring, the Contracts or forbearing to do or for having done or forborne to do any act in relation to obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favor or disfavor to any person in relation to the Contract or any other Contract with the Government. Any breach of the aforesaid undertaking by the seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the seller) or the commission of any offers by the seller or any one employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1947 or any other Act enacted for the prevention of corruption shall entitle the Purchaser to cancel the contract and all or any other contracts with the seller and recover from the seller the amount of any loss arising from such cancellation. A decision of the Purchaser or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the seller. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the seller towards any officer/employee of the Purchaser or to any other person in a position to influence any officer/employee of the Purchaser for showing any favour in relation to this or any other contract, shall render the Seller or such liability/penalty as the Purchaser may deem proper including but not limited to termination of the contract, imposition of penalty damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Purchaser.

12. PATENT AND OTHER INDUSTRIAL/INTELLECTUAL PROPERTY RIGHT:

The prices quoted in the present tender shall be deemed to include all amounts payable for the use of

patents, copyright, registration charges, trademarks and payment for any other industrial property rights. The bidders shall indemnify the Purchaser against all claims from a third party at any time on account of the infringement of any or all the rights mentioned in the previous paragraphs, whether such claims arise in respect of manufacture or the use. The bidders shall be responsible for the completion of the supplies, irrespective of the fact of infringement of any or all the rights mentioned above.

13. TRANSFER AND SUB-LETTING:

The bidders has no right to give, bargain, sell, assign or sublet or otherwise dispose of the resultant contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the resultant contract or any part thereof.

14. Purchaser reserves the right to change the number of the consignees and change the quantity of stores allotted to them.

15. Purchaser reserves the right to get the manufacturing capacity of all firms re-verified irrespective of the registration status.

16. Purchaser reserves the right to cancel/reject or Scrap any or all the bids without assigning any reason.

17. **FORCE MAJEURE CLAUSE:** If at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts or act of God (hereinafter referred to "events") provided, notice of the happening of any such event is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall by reason of such event, be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance, and deliveries under the contract. The contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and the decision of the Purchaser as to whether the deliveries have been so resumed or not, shall be final and conclusive, PROVIDED FURTHER that if the performance in whole or part or any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, either party may at its option terminate the contract provided also that if the contract is terminated under this clause, the purchaser shall be at liberty to take over from the contractor at a price to be fixed by the Purchaser, which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture in the possession of the contractor at the time of such termination or such portion thereof as the purchaser may deem fit excepting such materials, bought out components and stores as the contractor may with the concurrence of the purchaser elect to retain.

18. **TERMINATION OF CONTRACT:** Chandigarh Police may without prejudice to any other remedy for breach of contract, by a written notice of default of at least 30 days sent to the supplier/ selected bidder, terminate the contract in whole or in any part including forfeiting of performance security deposit:-

- i. If the supplier/selected bidder fails to delivers any or all quantities of the service within the time period specified in the contract, or any extension thereof granted by Indenter; or
- ii. If the supplier/selected bidder fails to perform any other obligation under the contract within the specified period of delivery of service of any extension granted thereof; or
- iii. If the supplier /selected bidder, in the judgment of the purchaser, is found to be engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the contract. Or
- iv. If the supplier/selected bidder commits breach of any condition of the contract.
- v. The seller is declared bankrupt or becomes insolvent.
- vi. The buyer has noticed that the seller has utilized the service of any Indian/foreign agent in getting this

- contract and paid any commission to such individuals / company etc.
vii. As per the decision of the arbitral tribunal.

19. Government Regulations It shall also be confirmed that, there are no Govt. restrictions or limitation in the country of the supplier or countries from which sub-components are being procured and/or for the export of any part of the system being supplied. Suppliers/Contractors shall provide a certificate to this effect.

20. FRANKING CLAUSE– The following Franking clause will form part of the contract placed on successful Bidder

- i. Franking Clause in the case of Acceptance of Goods “The fact that the goods have been inspected after the delivery period and passed by the Inspecting Officer will not have the effect of keeping the contract alive. The goods are being passed without prejudice to the rights of the Buyer under the terms and conditions of the contract”.
- ii. Franking Clause in the case of Rejection of Goods “The fact that the goods have been inspected after the delivery period and rejected by the Inspecting Officer will not bind the Buyer in any manner. The goods are being rejected without prejudice to the rights of the Buyer under the terms and conditions of the contract.”

21. FALL CLAUSE:

If at any time during the said period, the Contractor reduces the Sale price, sells or offers to sell such stores to any person(s)/Organization(s) including the Purchaser or any Statutory Undertaking of the Central or a State Government, as the case may be, at a price lower than the price chargeable under this Contract, he shall forthwith notify such reduction or Sale or offer of Sale to the SP (Communication) and the price payable under the Contract for the stores supplied after the date of coming into force of such reduction or sale or offer of sale stand correspondingly reduced. The Contractor shall furnish the following certificate to the Paying Authority along with each bill for payment for supplies made against the Contract.

“I/We certify that there has been no reduction in sale price of the Stores of Description identical to the Stores supplied to the Government under the contract herein and such Stores have not been offered/sold by me/us to any person(s)/Organization(s) including the purchaser or any Department of Central Government or any Department of a State Government or any statutory Undertaking of the Central or State Government as the case may be upto the date of the bill/the date of completion of supplies against all supply orders placed during the currency of the R/C at a price lower than the price charged to the Government under the Contract except for quantity of Stores. This clause is valid for a period of 03 years.

NOTE: The Contractor will also inform the Paying Authority and the SP (Communication), Chandigarh as soon as the supplies against all the Supply Orders placed are completed.

22. Risk Purchase Clause:

- (i) In the event of failure of supplier to deliver or dispatch the stores or provide the required services within the stipulated dates/period of the supply order /AT, or in the event of breach of any of the terms and condition of the AT, the purchaser will have the right to purchase the subject store elsewhere at the risk and cost of defaulting supplier after giving a notice to defaulting supplier. The cost as per Risk Purchase exercise may be recovered from the bills pending with the supplier even against any other supplies outside this contract or even from the pending bills with any other Govt. Department/Ministry.
- (ii) In the event of contract being cancelled for any breach committed and the purchaser effecting re-

purchase of the subject store at the risk and cost of contractor, the purchaser is not bound to accept the lower offer of Benami or allied sister concern of the contractor.

- 23.** Any information furnished by the bidder in support of their eligibility of tender conditions, past performance, registration status with concerned Government Agency, false certification of Make In India and all other relevant to the tender find fake, incorrect or fraudulent, then the bidder will be liable for forfeiture of EMD, Security Deposit, cancellation of contract and further Debarment from MHA as well as other Central Government Department's tender and other legal recourse thereof.
- 24.** The Bidder is required to give confirmation of their acceptance of following clauses which will automatically be considered as part of the Contract concluded with the successful Bidder. Failure to do so may result in rejection of Bid submitted by the Bidder.

CHAPTER - 3

Schedule of Requirement

OPEN STANDARD DIGITAL TRUNKING RADIO SYSTEM

Typical system configuration to meet technical specification and requirements is indicated below. The bidder may propose better system configurations if any, for full functioning, successful and trouble free installation, commissioning, operation and maintenance of the system supported by all necessary hardware, licensed software and documents along with the technical bid.

A. System Equipments:

Sr. No.	Requirement	Qty.
1.	Main Control Room Equipments (Master Site): a. Digital Open Standard Radio Trunking System Control and Switching Equipment (TSCSE) IP Based with complete hot standby. b. Network Management System comprising of Network Management Server (NMS) and Network management Terminals (NMT) with two clients c. AES 256 encrypted Dispatch Consoles collocated at Central Police Control Room d. AES 256 encrypted Dispatch Consoles collocated at hot standby site. e. 25 Channels IP based Digital Voice Logger System f. Hardware and Software for AVLS/APLS Server and Client g. 50" or better LED Monitor of reputed make for AVLS/APLS h. Telephone interconnect Gateway with E1 over QSIG/SIP over IP based i. Unified Threat management (UTM) for connecting CPCRR with Mirror site.	01 Lot 01 Lot 18 05 01 01 Lot 02 01 01 Lot
2.	Repeater/ Base Station Equipments: Sufficient number of Repeater Stations in 400/800 MHz with required configurations Redundant Repeater Site Controller, Masts/ Towers of required height, Antenna System, Transmitter Combiner, Receiver Multicoupler, Tower Top Amplifier, Couplers, Cables, Surge, Interfaces and lightning protection system, accessories etc.	Bidder to specify
3.	Antenna Masts/ Towers as per specifications	Bidder to specify
4.	Redundant 7/13/15 GHz Microwave links to connect all repeater stations to master site with necessary tower and accessories.	Bidder to specify
5.	Full Alphanumeric keypad Static Radio with GPS, AES 256 encryption and accessories as per Technical Specifications.	175
6.	Full Alphanumeric keypad Mobile Radio with GPS, AES 256 encryption and accessories as per Technical Specifications.	275
7.	Full Alphanumeric keypad Portable Radio with GPS, AES 256 encryption, belt clip, Li-ion or better battery, Single unit battery charger and accessories as per Technical Specifications. a. 06 Way or better Position rapid Multi Unit chargers b. Spare Li-ion 2100 mAh or better batteries c. Light weight Speaker Microphone, earphone with clip, complete	1800 50 3600 1800

	hand free kit for each Hand Held Radio	
	d. Suitable carrying case	1800
	e. Headset for portables	1000
	f. Vehicular Charger for portable radios	1500
8.	Digital Vehicular Repeater System (For Coverage Enhancement) with all accessories.	02
9.	Programming kits:	
	a. Repeater / Base Station Equipments	03
	b. Static Radios	03
	c. Mobile Radios	03
	d. Portable Radios	05
	e. Inter Site Link Test Equipments	02
	f. Portable programming laptop for repeaters and Master switch	05
10.	Latest AES with minimum 256 bits encryption infrastructure and Key Management System:	
	a. Hardware and software for OTAR with two clients	01 lot
	b. Key loader with interface cables	02
11.	Commensurate capacity 1+1 redundant online UPS's for all offered equipments with phase changeover switch for UPS and direct mains with maintenance free battery bank for 8 hours backup for:	Bidder to specify
	a. For all Repeater sites	
	b. Central Police Control Room-	
12.	Test Equipments/ Tools:	
	a. Radio Communication Test Set for Trunked radio system.	01
	b. Through Line Power meter	05
	c. Any other item required for field testing	01 lot
13.	Temperature Maintenance System:	
	a. Sufficient numbers of Environment Control System at all Repeater sites with automatic change over every 6 hours.	Bidder to specify
	b. Sufficient numbers of Environment Control System at switching centre with automatic change over every 6 hours.	
14.	Miscellaneous:	
	a. Earthing equipment	01 lot
	b. Transient protection equipment	01 lot
15.	Manuals of System components, TSCSE, repeater radios, static/mobile radios, portable radios, Digital Voice Logger, antenna system, inter site link equipments etc.:	
	a. Operating Manuals	20
	b. Service / maintenance Manuals	05
	c. Programming Manuals	05
16.	Any other hardware/software/system equipment required to meet the technical specifications and requirements of the tender	Bidder to specify

16) Services:

Sl. No.	Requirement	Qty.
1.	Project Management, Installation, Commissioning, Programming, Acceptance testing	01 lot
2.	Master and Repeater sites preparation alongwith cable tray inside the room, power cabling, earthing, surge protectors and any other necessary	01 lot

	civil/electrical component required for infrastructure etc.	
3.	Three years on site comprehensive warranty for all equipment's and CAMC for 7 years. (except batteries)	01 lot
4.	Training: a. Repair/ Maintenance Training at the manufacturer premises b. Repair/ Maintenance Training at the premises of Purchaser c. User Operational Training at the user's location	01 lot 01 lot 01 lot
5.	Civil/Electrical work at each Repeater Sites based on the network design and assessment of the bidder	01 lot
6.	Charges of Repeater sites Rental charges (for sites other than Chandigarh Police establishments), Electricity charges and technical manpower charges.	01 Lot

Note:

1. The bidder shall also submit the **scanned copy of** Bill of Material as per requirement clearly giving the country manufacture, nomenclature, make, model no. & quantities of all the items to be supplied for Open standard Digital Radio Trunking System.
2. The Project shall be completed on turnkey basis and any other item/ hardware/ software/ service required for successful completion of the project shall be provided by the finally selected bidder within the quoted prices.
3. The successful bidder shall not use any existing equipment/infrastructure (Except towers which may available at selected sites) and new equipment would have to be used for DTRS.

TECHNICAL SPECIFICATIONS AND REQUIREMENTS OF OPEN STANDARD DIGITAL TRUNKING RADIO SYSTEM FOR CHANDIGARH POLICE

The **Scope of Work** shall include design, supply, delivery at site, unloading, any other services associated with the delivery of equipment and materials, installation, commissioning, integration, software optimization, providing warranty/ post warranty services for the entire latest Open Standard Digital Trunking Radio System and any other related accessories/services for the complete setting up of the proposed system and all type of radios (Static/Mobile/Hand Held) as per the Schedule of Requirements and Technical Specifications. The successful bidder shall assume full responsibility of the complete System for its entire life cycle (10 years). The related licenses for import of System and wireless sets shall be the responsibility of the bidder from all government organizations. However Chandigarh Police will provide support for completing all relevant formalities for obtaining licenses.

S.No.	Description
1	SYSTEM OVERVIEW:
1.1	Introduction : Chandigarh Police intends to install Open standard Digital Trunking Radio System, in 400/800 MHz Frequency Band, fully ready for Wide Area Multiple site Operations for all over Chandigarh coverage. - System infrastructure and control room site equipments should be IP based. - Flexibility: The system must have flexibility for future up gradation as the system is expected to serve the communication requirement of Chandigarh Police for at least next 10 years.
1.2	Dispatch Center Sites: Dispatch Site at CPR, Chandigarh Mirror Site
1.3	i) Multi Channel Operation: The system should be equipped to support multi channel operation for meeting current traffic requirements and should be expandable by 100% in future. The bidder should specify the number of sites required and adequate number of channels required at each site to meet the required grade of service from the proposed system. ii) The number of frequency spots required for meeting 4000 radios operation as per traffic norms should be projected as per Appendix – 5 from day-one with DQ-4 quality. The number of repeaters should also be factored from day-one. Tentative Procurement Plan of radios: - - At initial Implementation 2250 nos. Radios (procurement time line of Radios and other components is mentioned in annexure 'A'.) - Radios 1750 nos. to be added over a period of next 5 years iii) The System should provide report of traffic as per Appendix-5 on full load. In case any area is not provided require traffic norms with free from congestion at DQ-4 quality, the bidder shall be responsible to install additional infrastructure in quoted cost by the bidder at no cost to the user.
1.4	Modular Expansion : The system must have the capability of modular expansion in channels by adding extra repeaters only (upto the maximum capacity) at each site.

1.5	Efficient Channel Utilization: The system shall not unnecessarily tie up multiple channels at multiple sites, for all call types, for the same user. The system must be efficient in order to minimize the number of channels used in any given conversational scenario. The bidder shall describe how the channel can be efficiently allocated.
1.6	System Reliability: Purchaser is very concerned about the reliability of such an expensive system. This Open Standard Digital Trunking Radio (400/800 MHz) System will be used all over Chandigarh. The Bidder must substantiate technically that their proposed system is very reliable or has adequate reliability mechanisms included in its architecture / design portfolio. No degradation in the system trunking features is permissible in case of failure of a controller. All field replaceable units must be hot swappable.
1.7	Roaming: Subscriber radio should be capable of accessing any and all sites within the system for ease of roaming.
1.8	Number of Talkgroups : a. A Talkgroup is defined as group of members having the same functions or role and where there is a need to communicate to each other. The system should support at least 250 Talkgroups, with the capability to expand. The bidder should specify the maximum number of talkgroups the proposed system can support. b. It should be possible to give different priority to different talk groups system. c. Any subscriber radio can be programmed to be a member of any talkgroup either at initial implementation or at any time in the future. Bidders should describe how this process would take place and what would be the restrictions when a subscriber radio is added in a talkgroup. d. All subscriber radios should be capable of being assigned with talkgroups address designators. All subscriber radios operating with the same talkgroup must receive both sides of every conversation addressed to or from the talkgroup.
1.9	Number of Unique Individual Radio ID : a. The signaling language will permit the system to assign not less than 2250 unique individual radio IDs (Identification), with the capability to expand to 4000. The bidder should specify the maximum number of unique individual radio IDs the proposed system can support. b. All radios must have the capability of being a member of any or all talkgroups. Regardless of the talkgroup affiliation, the radio ID for subscriber radio should not change. Each subscriber radio must have its unique individual radio ID, independent of talkgroup and/or telephones interconnect capability.
1.10	Up gradation / Updation: The system and subscriber radio features and facilities should preferably be software upgradable. (check for free upgrade clause).
1.11	The equipments / items of the proposed system should meet all EMI/EMC standards wherever applicable.
1.12	Interoperability: The entire system shall be IP based such that future expansion of sites is possible. Other Manufacturer's Radio terminals of Open standard Digital Radio Trunking System should operate on the system with standard trunking features. Bidder shall submit test report/certificate from Association of the proposed technology/ILAC/NABL accredited Government Lab for the proposed subscriber radios and repeater in compliance to interoperability requirement. The bidder shall demonstrate the interoperability of all mandatory functionalities as mentioned in the respective trunking standard with sample sets of minimum 02

	other vendors.
1.13	The proposed trunked radio system shall comply with the ITU recommended Digital Radio Trunking Standards, at the time of the proposal submission.
1.14	Frequency Planning: a. The bidder shall perform radio frequency planning ensuring efficient use of the available frequency pairs. The frequency plan including calculations shall be submitted to Chandigarh Police for review, as part of the Design stage. b. The successful bidder shall perform radio frequency planning for microwave link in ring topology as per NFAP ensuring efficient use of spectrum. The frequency plan including calculations shall be submitted to Chandigarh Police for review, as part of the Design stage. c. The successful bidder shall enclose detailed calculations as part of the Design stage, to establish that there will be no interference/ illegal carrier from other radio communication links operating in this area in the same band of frequencies. d. The use of radio frequency spectrum in India is regulated by the Wireless Planning and Coordination (WPC) Wing of the Ministry of Home Affairs, Government of India. Frequency clearance for the use of specific frequencies is to be obtained. Based on the frequency plan proposed by the successful bidder, approval from WPC shall be obtained. The bidder, if so required by the WPC, shall incorporate specific changes in the frequency plan, after mutual discussions. e. Bidder shall specify number of frequency pair required for signal coverage and inter-site connectivity through secure microwave spectrum for complete Chandigarh.
2	SYSTEM FEATURES :
2.1	Signaling Channel Concept : a. This Open Standard Digital Radio Trunking System should operate using the dedicated signaling control channel protocol concepts with high speed data of 7.2 Kbps or better. b. Sufficient redundancy with auto switch over should be provided for control channel at each site. Bidder should explain the signaling scheme in detail.
2.2	Priority Levels: a. The proposed system should allow a dispatch console operator to preempt or over-ride a particular subscriber radio into a selective call, group call to pass important conversation. b. A minimum of 4 levels of priority should be incorporated in the system to ensure timely processing of calls, including group call, individual calls as well as telephone calls. The levels of priority are classified as follows. c. Emergency Priority – This should be highest level of priority upon activation of the emergency button, the next available voice channel should be immediately assigned regardless of system loading. d. Operation Priority – This should be minimum 3 levels of priorities, to be assigned according to the requirements of the users.

2.3	Automatic Retry: In an adverse signaling condition, when a subscriber radio's request for voice channel, is not properly received by the system on the first try, the subscriber radio should automatically send the request again, until the request is acknowledged or the maximum allowed number of retries is reached. The bidder should specify the maximum number of retries for the system.
2.4	Out of Contact Indication: a. Whenever a subscriber radio leaves the coverage of the signaling channel, and attempts to access the system (via PTT), an audible alert should be sounded. These alerts should have distinct tones other than any other audible tones generated by the subscriber radio. This will enable the end user to determine that the radio unit is out of contact with the system. b. Dispatch console should be alerted by visual or audio indication if called radio is out of range/ contact. c. In addition to audible alert, a visual indication of this condition is preferred to be displayed on the operator console / System management terminal.
2.5	Queuing of Request for Voice channel: If the system becomes fully loaded (all available RF voice channels are assigned) the second and lower precedence level requests for a voice channel will be placed in a queue. The queue will cause the system to assign voice channels (as they become available). According to the priority levels bidders should specify the length of queue.
2.6	System Busy Tone : When the system is fully loaded and the subscriber radio requests for a voice channel by pressing the PTT, a distinct system busy tone should sound on the radio, as long as the PTT button is pressed/any other tone to differentiate from access tone shall be accepted.
2.7	Busy queuing call-back: a. The system should provide a call-back feature when any subscriber radio is placed into a system busy queue. b. The system will cause the subscriber radio to emit an audible alert, specific for call back, and the subscriber radio should access the assigned channel.
2.8	Continuous talk-group Affiliation Notification: The system should broadcast continuous updates of the channel assignments of talkgroups to all subscriber radios enabling the late entrant radios to automatically join conversation in progress.
2.9	Message / transmission type of Talkgroup : The different user groups supported on this system will have different call characteristics, and hence may be supported more efficiently by being message trunked (a certain post transmission access time exists) or by being transmission trunked (the post transmission access time is zero). It should be possible to select message trunked or transmission trunked via the system manager terminal. The repeater hang time should be programmable. The bidder should specify this operation.
2.10	Individual Subscriber Radio Disable: a. The system must allow the system manager terminal to disable over the air any subscriber radio(s) currently operational on the system. The system manager terminal must indicate when it succeeds in disabling the subscriber radio. A disabled subscriber radio must not be able to transmit/receive nor otherwise join into any voice conversation on the system.

	b. If for any reason the trunked system is shutdown or disabled, any disabled subscriber radios must remain disabled. c. A disabled subscriber radio can only be re-enabled by the system manager terminal. Once this is accomplished, an indication will be sent to the system manager terminal. d. To preserve system throughput, the operation of enabling and disabling radios be done through the control channel. e. Bidder should describe the above process in detail.
2.11	Multiple Voice Channel: a. RF Voice Channels should be assigned as needed and no user should be dependent on any given voice channel for communications, the failure of any one RF voice channel will not be apparent to the user. b. In the event of a RF voice channel failure, the controller should not assign that particular repeater and will simply continue assigning the remaining voice channels.
2.12	Transmitter Low Power Shutdown: a. In addition to the receiver interference condition, the site controller should detect a loss or decrease in repeater transmitter output power. If the output power of the transmitter falls below a certain threshold level, the site controller should not assign that channel. b. This threshold should be set such that a channel will automatically be taken out of service when its output power drops to a level where communications become degraded.
2.13	Site Trunking: It is imperative that the failure of a site link will result in that site going into site trunking mode and work independently from the rest of the sites in the system. Site trunking mode should still provide limited trunking features just like any single site trunking system. Bidder to specify the features that will be available in single site operation.
2.14	System Fallback Mode: Central control / multisite control system shall have minimum two level of fall back mode.
2.15	System should support Over the air programming (OTAP) or through wire or better and Over the air rekeying (OTAR) for subscriber radios.
2.16	Encryption: At least AES256 encryption or better protection and "For re-keying" either dynamic keys shall be used or key management system (OTAR) has to be provided. Bidders must include key management tools that support OTAR delivery of crypto keys either via direct connection to the network or via a wireless connection. Key Management Centre at CPCR and Mirror site shall be provided with license to support terminals from other manufacturers. It shall be possible to Stun/Kill the compromised terminals. OEM certification to be provided.
2.17	Digital voice and Encrypted Digital Voice transmission: The proposed system should be capable of supporting Digital voice and data. The proposed system should also support Encrypted Digital voice call with the following features. a. Radios equipped with secure capability can have the option to communicate in either the encrypted or clear mode. b. End-to-end encrypted radio communication between two or more radios must be ensured without compromising on voice quality. This means that for a call involving two or more repeater sites, the voice signal remains in encrypted forms both over the air as well as through the link (microwave or optic fiber or wire line) connecting the sites. c. Monitoring of all call, both non-encrypted and encrypted from a dispatch console.

	d. Transmitting to the subscriber radio from a dispatch console in either non-encrypted or encrypted mode. e. AES 256 Bit type-3 certified encryptor module must be built-in into the radios or equivalent, compatible with international standards.
3	SITE ASSIGNMENT:
3.1	Received Signal Strength Measurement: Roaming subscriber radios operating in the system should be equipped with the capability to monitor signal strengths of the adjacent repeater sites. This allows the subscriber radios to automatically select the site with the best signal, instead of re-affiliating with the next available site when the audio quality at the current site becomes unacceptable. Rest of subscriber radios should be able to operate only in the pre-specified site.
3.2	System Database Updating: a. When a radio user enters a site and changes the talkgroup selector on his radio or switches on the radio, the radio should automatically transmits its unique ID and its talkgroup affiliation to the system controller. Upon the receipt of such a information from the subscriber radio, the system controller should determine the site affiliation of the radios, and update its database with all these new information pertaining to the radio. The whole process should be automatic. b. To allow the system controller to maintain an accurate, up-to-date database on the location of each subscriber radio, the system must also be able to determine if a radio is out of range, switched off or re-affiliated with another site. Thus, calls should not be assigned to users who are not active on the system.
3.3	Dynamic Site Assignment: a. Where members of a talkgroup are not present at a site, that site should not be activated for a conversation involving the said talkgroup. This should ensure that valuable channel resources are not tide-up unnecessarily, and is a critical requirement in this wide area system. b. The System Controller should be programmable via the system manager terminal with information which will designate subscriber radio as either wide area users or single site users. Programming by individual radio for site assignment is unacceptable in this system because of the multiple numbers of sites and the expected large number of users.
3.4	System Handover: As a subscriber radio moves out of a site into another site in the wide area system the radio should automatically affiliate on to the new site. The call in progress must follow the user to the new site. The process must minimize the potential audio loss for soft handover. The Bidder should explain how a system handover process works on his system.
3.5	Subscriber should get traffic channel allotted within 300 msec. for single site operation and for multisite operation. The system should be capable of providing channel allocation within 300 msec. for 99% of all subscriber requests. For 1% subscriber requests the channel allocation shall be with-in 01 second. Bidder to specify channel allocation time.
4	CALL TYPES:
4.1	Selective Call: - The system should be compatible for selective calls facilitating privacy in the conversation.
4.2	Group Call: The system should allow subscriber radios to be grouped into talkgroups/sub-groups. Under normal operation, group members will communicate with the dispatch console operator as well as with other members in the same talkgroup. The subscriber radio user should be able to talk to other talkgroups that are preprogrammed on the radio by manual selection on the

	radio. The proposed subscriber radios should receive and display the ID of the transmitting radio. The system should support simultaneous group call for at least 05 parallel Talk Groups from Day one with capacity to add another talk groups as per the future requirement of radios suggested at any instant of time irrespective of subscriber location.				
4.3	Collective Call: - It should be possible to group any combination of talkgroup into a higher level group for purposes of multi talkgroup/collective calling or dynamic regrouping. - Collective calls can be configured to interrupt group calls or wait until all group traffic has ceased before being processed. - Subscriber radios should respond to a collective call without requiring the subscriber radio users to change the talkgroup affiliation. Each collective call should require only one RF voice channel to conserve frequency resources.				
4.4	Emergency Call: The proposed system should immediately allocate a voice channel on priority to the authorized radio subscriber even when all the channels are busy, by pressing a single button on the subscribers' radio. The emergency channel assigned will remain with the radio subscriber for a preset period of time.				
4.5	Telephone Interconnect Call: - The bidder should describe the operation of telephone communication in detail and limitations if any. - Telephone communication IP PABX (SIP over IP)/ E1 over QSIG in case of Mobile /Static/ Hand-held radio to Landline and vice-versa must be supported by the system.				
5	COVERAGE AND FIELD TEST: - The proposed system must provide radio coverage throughout the Jurisdiction of Chandigarh for Hand Held radios as well as mobile radios with sufficient sites to meet traffic requirements as attached at Appendix-5. - The proposed system must provide penetration in building above ground level throughout Chandigarh. - The Bidder to ensure proper ensure proper signal level inside vital buildings/locations (List can be provided on bidder's request) by installing suitable in-building solutions. - The prospective bidders to submit portable inbound/ outbound RF coverage calculations and coverage plots of Chandigarh considering suitable number of repeater sites with minimum -85dbm signal strength on road and -95dbm inside the building(single wall coverage 30% of the room should be exposed to outside space) to confirm that the required RF coverage stated above can be achieved. - The RF coverage should provide a minimum Delivered Audio Quality (DAQ) – 4 or above audio signal for both outbound (talkout) and inbound (talkback) communications with 95% reliability from a location (to be tested at different time periods). Primary requirement is to achieve DAQ-4 or above but in case of difference of opinions then signal strength -85dbm on road and -95dbm inside the building will be considered for RF coverage. The DAQ shall be defined as follows: <table border="1" data-bbox="230 1919 1325 1990"> <tr> <th>DAQ</th><th>Definition</th></tr> <tr> <td>1</td><td>Unusable speech present but not understandable.</td></tr> </table>	DAQ	Definition	1	Unusable speech present but not understandable.
DAQ	Definition				
1	Unusable speech present but not understandable.				

	2	Speech understandable with considerable effort. Requires frequent repetition due to noise or distortion.
	3	Speech understandable with slight effort. Requires occasional repetition due to noise or distortion.
	3.5	Speech understandable without repetition. Some noise or distortion present.
	4	Speech easily understandable. Little noise or distortion.
	4.5	Speech easily understandable. Rare noise or distortion.
	5	Perfect. No distortion or noise discernible.
	f. The audio quality shall be tested by the joint team of bidder and Chandigarh Police or any third party at different places in Chandigarh city. DAQ-4 or above audio signal for both outbound and inbound should be ensured by the bidder. g. The signal/audio quality to be tested inside the building (25%), outside on the fringe area of the coverage (50%), vital locations (25%) etc. h. Field test shall be carried out after completion of each site installation in order to estimate coverage and DAQ levels in different locations. i. After full completion of all sites installations for checking of handing over, interference, compatibility with existing network and other features. j. After completion of microwave networking in order to estimate the required data throughput of 2 Mbps from each base station to the control Centre irrespective of the number of hops in between, automatic change over in case of cutoff of a link. k. The signal strength in various locations in Chandigarh city shall be measured while testing audio quality. The equipment for measuring the signal strength shall be provided by the bidder for testing. l. The test equipment to be calibrated by government approved lab.	
6	MAIN SYSTEM EQUIPMENTS: Introduction: The backbone system should consist of one main control site and suitable number of repeater sites to provide reliable, secure digital voice and data communication among the main police control room, districts/ unit control rooms, static/ mobiles and portable radios throughout Chandigarh. The repeater sites should be linked to the main control site through appropriate microwave link and should also have a provision to interface with I.P based WAN/LAN of Chandigarh Police as stand-by to the microwave link.	
6.1	Main Control Room Equipments (Master Site): Open Standard Digital Radio Trunking System Control and Switching Equipment (TSCSE) IP Based: centralized or distributed.	
	a. The TSCSE will be installed at main control room site. It will perform automatic multisite signaling and control functions for wide area call. It must support minimum 2250 subscriber radios and scalable to 4000 subscriber radios and minimum 25 talk groups without any additional cost of hardware and software. The TSCSE should support encrypted and clear digital voice calls, data call etc. There should be provision for dispatch console connectivity, voice logger, telephone interconnect, text messaging, packet data service, Over the Air Programming (OTAP) or through wire or better, Over the Air Re-keying (OTAR), Network/ System manager terminal, Encryption Key Loader, intersite link data etc.	
	b. There shall be two clients for OTAR and OTAP facility, one at CPCR, PHQ and other at Mirror site.	
	c. The TSCSE (Centralized or distributed) should have control over the RF channel assignment of the system. It should identify an available RF	

	channel at each site before directing the concern subscriber radio or group of radios to the available voice channel.
	d. Open Standard Digital Radio Trunking System Control and Switching Equipment (Centralized or distributed) IP Based with hot standby controller either centralized or distributed with complete set-up as standby system to avoid single point of failure.
	e. Any failure in the main TSCSE will be detected and all functions should be taken over by hot stand-by TSCSE automatically without losing any information or data.
6.1.1	Features of TSCSE :
	a. IP based centralized or distributed Redundant Switching / Routing Equipment b. Operational voltage: 230 V AC/ - 48V DC c. Management terminal PC with 21" LED monitor or better d. Expandability- Modular e. Lightening protection in power source as well as communication path f. Licensed copy of all system and application software's g. Sufficient communication ports for Switching / Routing Equipment for inter site link configuration h. Bidder should specify capacity of Switch support for: i. Maximum number of Repeater / Base sites. ii. Maximum number for RF / Communication channels iii. Maximum number of Radio terminals iv. Maximum number for Dispatch Consoles v. Maximum number for PABX / PSTN connections vi. Maximum Talk Group vii. Maximum Logical radio ID i. Capability to support Data applications. j. Status SDS, Text Messaging facility min. 100 character
6.2	Network Management System: The Network Management System should consist of latest server PC with minimum 21" LED monitor and all necessary software's. It should perform administrative work, configuration management, accounting management, performance management, security management and fault management of the system. The System manager terminals should have the capability to access the function and features of the Open Standard Digital Trunking System. There shall be two Network management terminals one at PHQ and other at Mirror Site.
6.2.1	General
	a. Administration and maintenance activities remotely on the sub-systems.
	b. System support for number of NMTs.
	c. The NMT should provide map of the equipments such as switch controllers, radio base stations, switches and servers / workstations in radio system with status and alarm indication.
	d. The NMT should provide user-friendly GUI to the NMS administrator and operators with pull-down menu, function keys, online help screens, windows, color pictures and statistical graphs for easy operation and interpretation of information.
	e. The NMT/NMS shall provide report module in GUI form for full traffic utilization per site of the network.
	f. The NMT/NMS shall provide customized reports of total sites, system performance and system logs.
	g. Provision for monthly system backup and restoration facility from backup.
	h. The network management system shall be compatible with all proposed

	system equipment.
6.2.2	Fault Management: The fault management feature should have the capability to monitor and display the status and status history of system components and when needed perform diagnostics. In case of link failure, the alarms shall synchronize automatically after a link restoration assuring that system managers always have complete and accurate history of events.
6.2.3	Configuration Management a. Subscriber Management for i. Radios ii. Talk group / Multi-Group iii. Status / Message Management b. Infrastructure Management i. Switch Controller Management ii. Radio Base Station Management c. System Software Management
6.2.4	Accounting Management: The accounting management feature should have the capability of tracking the activity of radio users on the system and allow the customer to produce reports about the air-traffic on the system.
6.2.5	Performance Management: The performance management feature should have the capability to monitor, control and optimize the utilization of system resources.
6.2.6	Security Management a. System should support multiple number of network management user accounts. b. Access rights to the various network management applications. c. Multiple levels of access rights to users for performing tasks with these applications. d. The security management feature should have the capability of allowing the establishment of authorized log-on names and passwords to the NMS.
6.2.7	Maintenance of NMS a. Necessary licensed OS, Application and Recovery software to maintain NMS server and terminals. b. Database backup facility.
6.3	Dispatch Consoles: The central police control room should be equipped with dispatch console equipments capable of having communication with the subscriber radios under their respective jurisdictions and control/coordinate their activities. The dispatch console control electronics should comprise of distributed independent multi processors. Each console should be capable of independent operation. The console equipment should be provided with all necessary control to access the Digital Radio trunking system. The audio routing and interconnection in the console should be based on digital voice switching technology providing virtually no cross talk, even in multiple patching conditions and high immunity to radio frequency fields. It should be equipped with the following minimum features: a. Licensed copy of all system and application software. b. Dispatch console should be able to control the following: i. Individual calls (Digital & Encrypted AES 256 bits) ii. Group calls (Digital & Encrypted AES 256 bits) iii. Data services iv. Patched-group calls v. Status, SDS and Text messaging minimum 100 characters. vi. Group membership management c. Radio enable/disable facility through dispatch console/NMT

	/SMT/NMS/SMS.
	d. The Dispatch console with latest professional Computer (PC) with 19" LED Monitor or better.
	e. The Dispatch console with Graphical User Interface (GUI) and follows Windows/Linux design standards such as: pull-down menus, drag and drop capability, visual icons, on-line help, graphical toolbar and re-sizing capabilities.
	f. The GUI should be mouse driven.
	g. Group/Individual calls should initiate by selecting a talk-group/individual from the graphical display.
	h. The Dispatch console should show call history.
	i. Dispatch console should control the Dynamic talk group.
	j. A Goose neck micro phone as an input device for voice communication.
	k. A foot switches for PTT activation using the foot.
	l. A reputed make headset with all dispatcher consoles and external speakers.
6.4	Digital Voice Logger System (DVLS) IP based: - The system shall provide audio recording of all channels. This system must be able to reconstruct the total scenario of radio communication and Data between the wireless dispatcher and the PCR van related to an incident. System must provide scenario replay in a simple way to reduce such time dramatically. Replay of the scenario should be possible based on radio I.D. / talk group I.D., Alias, etc as well as date / Time criteria. The system should have the capability to store and retrieve the selected audio calls to an archived media such as DVD/Pen drive etc. Primary storage media should have the capability to store the audio calls for at least 1 year. The system should be temper proof and should show results if any tempering has happened. The system should throw in alerts if recording is not happening on any channel due to any reason. User must have an account name and password and the administrator must define who has the access to what in the system. User may log in to the recorder and may only have access to his own calls. It should be capable of recording 25 channels simultaneously.
6.5	Automatic Vehicle/Person Location System (AVLS/APLS):
	a. An automatic Vehicle/Person Location System (AVLS/APLS) working on the Network Radios, for monitoring and management of designated radios on 50" LED monitor, shall be provided.
	b. For the location of radios in the network, Server and Client shall be a standalone application subsystem and comprise of hardware, software and network to be located at the Master Site CPCR. This application shall be supported on a separate Dispatcher for the location of radios in the network, with the Fault Management Controller. The Dispatcher shall show a map of the city. Mobiles & Handhelds which have the GPS feature enabled and are out in the open for the GPS to be activated, shall be tracked on the Dispatcher screen. The Dispatcher screen shall show the coordinates of the location of a user along with the User ID and shall track its movement as it moves. For, providing this feature, a separate AVL/APL Server shall be provided and interfaced to the Radio system. The Server shall have features such as message queues and prioritization so as to avoid network congestion that might be caused by sending automated message for the AVL/APL application, when a large number of user congregate within the area of a single base station.
	c. The person in control shall be able to know the location of vehicles and Personnel (carrying Radio Units with GPS) automatically over a one

	minute update. The bidder should specify accordingly.
	d. The Radio Units having built-in GPS should support the following: i. GPS activity indicator ii. Current position information iii. Position information sending on request or on triggers (eg: time, distance, Status message) iv. Position sending during emergency calls
	e. The radio shall automatically update its GPS location when one of the following events happens: i. When polled ii. After moving a pre-defined distance iii. After a pre-defined time has lapsed iv. When an emergency call is made v. Bidder shall demonstrate GPS accuracy of ± 10 meters or better
	f. Digital Map: The Base Map shall be provided by Chandigarh Police; however the bidders will be responsible for integration and display of all GPS enabled resources on the Map.
6.6	Unified Threat Management (UTM) for connecting CPCR and Mirror site.
A	UTM should be NGFW Type with Rack unit form factor, IPV6 ready from day 1, Hot Swappable dual power supply, having redundant fan.
B	Features: Layer 3 – Layer 4, NAT, VPN, Application Visibility and Control (AVC), Next Generation Intrusion Prevention System (IPS)
c	Protocols: TCP, UDP, HTTP/TCP, TCP/UDP
d	Packet Size (KB): 64
e	Throughput with all features enabled Under Test Condition) (Mbps): 9000 or better
f	Concurrent Session/Concurrent Connection: 8M
g	New session/Connection per second: 450K
h	Type of Interface Supported Multiselect:: 10G SFP+
i	Number of GE Copper interface: 8
j	Number of 10G SFP+ interface: 2
k	Number of GE Small Form-Factor Pluggable (SFP) interface: 8
l	Number of col /WAN Ports: 8
m	Number of Ipsec VPN Peers supported (Site to Site): 2000
n	Number of Ipsec VPN Peers supported (Client to Site): 50000
o	Number of SSL VPN Peers supported (Client to Site): 10000
p	SSD Storage: Minimum 400 GB
q	Type of Processor: x86, ASIC
r	Details of the Firewall Policies for the Firewall provided with the License: Web Security Essentials / URL Filtering, IPS License, Application Visibility License, APT (Advance Persistent Threat) License (Anti Malware Protection , C& C attacks, Geo IP Protection, Zero Day Threat Protection), Gateway Anti virus, Gateway Anti spam
s	NGIPS Signature supported: 10000
t	Security Intelligence: IP Domain
7	Repeater Stations:
	a. The bidder shall estimate and propose number of sites along with numbers of Base radios at each site for complete coverage of subscriber radio operating in Chandigarh to meet traffic requirements as shown in figure attached at Appendix-5 . The dynamic surge of traffic shall be 15% on central site and 10% at fringe area in addition to normal traffic.

	b. The prospective bidders may carry out the survey of entire Chandigarh and propose suitable locations and height of masts/towers for installation of the antenna for all over Chandigarh coverage. The repeater site locations may be selected on mutual agreement between Chandigarh Police and bidder to achieve the desired RF coverage. Master site will be provided by Chandigarh Police. The bidder shall select Repeater sites from the list of suggested sites mentioned at Appendix-29 or any other sites selected mutually.
7.1	Repeater Site Controller: Site controller should provide the necessary control and signaling functions to interact with the main system controller in dynamic allocation of channels to the requesting subscriber radios. The site controller should differentiate between local and roaming users and allocate the channels accordingly. The site controller should support all types of calls. Site controller should have redundancy and redundant site controller should automatically take over if working controller gets failed. All database updating should take place in working and redundant site controller.
7.2	Repeater System: The repeater should be of Open Standard Digital Radio Trunking (400/800 MHz) and capable of handling digital radios in the network. a. The repeater sites should be linked to the control and switching equipment installed at the main control site through appropriate microwave link and provision should be made for standby link through I.P based WAN/LAN of Chandigarh Police. b. The repeater station should be designed for continuous unattended 24 hours of operation. Loss of one RF channel must not affect the operation of the other channels. c. Every repeater module/ base radio must have an independent power supply such that PSU failure shall not affect more than one repeater. d. The repeater station should be capable of monitoring the integrity of its equipments. Automatic alarm reporting to the system manager, operator console and diagnostic aids for detecting and isolating problems should be provided. e. The controller should tune on designated frequencies in the manner that it shall not assign channel to the unwanted carrier i.e. non-member of the system. f. The repeater should be housed in the free standing in-door cabinets. Every repeater cabinet should come with a surge protection. Diagnostic indicator / meter should be provided at site for maintenance and repair work. g. Repeater hang time: The bidder should describe in detail the use of repeater hang time in operation of their proposed system. The description should focus on how the proposed system will maximize the efficient use of the trunking channels and what flexibility the user has in changing hang time. h. In case of failure of site controller other repeater/site controller should take over as site controller. i. Whenever new control channel is assigned as a control channel, field radios should acquire that as control channel automatically. Repeater should meet or exceed the following specifications.
7.2.1	General: a. AC Supply Voltage: 220 V AC, 50 Hz $\pm$10% b. DC Supply Voltage: Bidder to mention the operating DC voltage c. Temperature Range: -10°C to + 55°C d. Channel Spacing: 12.5/25 KHz
7.2.2	Transmitter: a. Frequency: 400/800 MHz Band

	b. Modulation: Bidder to specify.
	c. RF Power Output: Bidder to specify and programmable
	d. Duty Cycle: 100%, 24 x 7 basis
	e. RF Output Impedance: 50 ohms
	f. Frequency Stability: ± 0.5 PPM or better at -10°C to $+55^{\circ}\text{C}$
	g. Adjacent Channel Power: -60dBc or better
	h. Audio Distortion: < 3% at 1 KHz, at 3 KHz deviation (clear mode)
7.2.3	Receiver:
	a. Frequency Range: 400/800 MHz Band
	b. Frequency Stability: ± 1 PPM from -30°C to $+55^{\circ}\text{C}$
	c. Channel Spacing: 12.5/25 KHz
	d. Sensitivity: - 115 dBm or better at 5% BER Static
	e. Frequency Generation: Synthesized
	f. Modulation: Bidder to specify.
	g. Adjacent Channel Selectivity: 65 dB or better
	h. Inter Modulation: 70 dB or better
	i. Spurious and Image: better than 70 dB
	j. RF input impedance: 50 ohms
	k. Audio Distortion: <3% at 1 KHz
7.3	Repeater Stations Tower/Mast:
	a. Required number of tower/mast of suitable height and weight for installation of antenna system at all repeater sites will be the responsibility of bidder.
	b. The height of the towers should be selected in such a way that it provides RF coverage all over Chandigarh for smooth communication.
	c. The prospective bidders shall mention the height of the towers/ masts considered while designing the network for all over Chandigarh coverage.
	d. All towers, nuts & bolts etc shall comply with the requirements of Indian Standard (IS). In case of any conflict between the two standards, the Indian Standards shall prevail.
	e. The towers shall be self-supporting galvanised steel structure.
	f. Type of tower: Appropriate height monopole/three/four legged light weight Tower (Antenna mount Platform, cable Tray, Safety climbing Ladder, etc) Hot Dip Galvanized roof top tower with tower load as per tender requirement. IS: 8500 – Structure micro alloyed (ordinary and high strength quality), IS: 2062 – Structured steel (fusion welding quality).
	g. Ladder and platform: From bottom to top of the tower with guard with resting platform at 15m and working platform at 30m etc.
	h. Lightning Arrester: Advanced protection system (Early Steamer Emission).
	i. Tower Earth: All legs of the tower shall be separately earthed with 70 Sq mm multistrand copper wire. Earthing shall be provided with suitable earth enhancing compound.
	j. The towers shall be equipped with Aviation Warning Lights in conformity with the relevant requirements of ICAO. All proposed tower facilities shall be marked and lighted as per Indian Aviation Administration rules and requirements.
	k. Foundation and structural design diagram: The bidder should inspect the building/sites and design the foundation taking into consideration of the building parameters and propose the tower.
	l. Structural design & foundation design details for towers to be submitted.
	m. During construction of the Tower foundation, the Contractor shall be responsible for the safety of the site and the structures nearby. The earthing design shall be as per IS 3043 or better standard for radio Towers.
	n. A means of preventing unauthorized access onto the ladder shall be provided.

	o. The Tower/ Mast should be able to withstand at least upto 160 km/hour wind speed of the concerned Seismic Zone as currently defined by the Indian Meteorological Department (whichever is higher) while supporting the maximum number of antennae plus four additional antennae required of the same type/size, located at full height. p. The tower loading must take into account the wind load, seismic conditions (Zone IV), antenna loads, all tower accessories and at least 100% safety margin against structural failure for the actual anticipated configuration.
7.4	Repeater Antenna System: a. Repeater site will require high gain (bidder to specify) Omni/ directional antenna, for transmit, and receive alongwith minimum 02 diversity in case of directional amplifier. One each spare antenna of Tx and Rx shall be provided by the Bidder at each site in addition to operational antenna. b. The antenna systems should be connected via continuous 1x5/8" LDF (or better) cable for Tx/ Rx with proper connectors and grounding kit to the combiner / receiver multicoupler. Cable installation should be as per standard telecom procedure with minimum signal loss. All antenna systems should be installed with proper lightening protection. Site must have adequate grounding system; reputed make lightening / surge protection devices should be used in the antenna/ power supply systems. c. The antenna and tower should be able to withstand minimum 150 km/hour wind speed. d. The bidder should specify power handling capacity of antenna. e. The bidder should provide specification sheets of the antennas, receiver, multi-couplers, transmitter combiners, and any other equipment necessary to assure a complete system. f. Gain of antenna should be selected in such a way that it provides RF coverage all over Chandigarh for smooth communication. g. The outdoor antenna shall be robust construction utilizing corrosion resistant material. The feeder cable connections shall be weatherproof and fully sealed. h. RF Power Monitoring shall be provided for Tx Antennas. i. Transmitter Combiner: i. The design of the transmitter combiner should be such that it caters to redundancy and maintenance. ii. Combiner should be of auto tune type field tunable. iii. The transmitter combiner should be expandable and should meet the following minimum specifications: A. Channel Separations: 250 KHz or better B. Isolation Tx- Tx: 60 dB or better C. Insertion Loss (5 Channel): 3.6 dB or less D. Operating Temperature: -10 to 55°C j. Receiver Multicoupler: i. The receiver multicoupler should be expandable type with all unused ports terminated with 50 ohms. ii. The multicoupler to reject out of band RF signals. k. Tower top receiver pre-amplifier of minimum 20 dB gain should be supplied at each repeater site to improve radio coverage.
7.5	Redundant 7/13/15GHz Microwave link to Control Inter Site Link (1+1 Microwave) in frequency band available at the time of application: a. All the repeater sites should be connected to TSCSE through Microwave Link. Repeater and control/switching equipment linked by suitable capacity Microwave link in ring topology along with required hardware (e.g. mux/ demux) and having hardware redundancy i.e. 1+1 hot standby configuration. In case of Microwave link failure the system should work in

	I.P based WAN/LAN of Chandigarh Police.
	b. Frequency Band: 07/13/15 GHz
	c. Power Output: Bidder to specify
	d. Antenna Gain: Bidder to specify
	e. 230 V AC operations.
	f. Interfacing ports: IP / E-1.
	g. Link management terminal with license software
8	GENERAL RADIO FEATURES: a. The activation of the transmit control (PTT) should initiate a request for a channel via the signaling channel. The request should include the talkgroup to which the radio set is designated. In the event that the request is not acknowledged by the control channel the unit should automatically attempt re-access until the access is accomplished; or if no RF voice channel is available an indication of busy should be presented at the subscriber radio and automatically retry call (Call prompt) when RF voice channel is available. b. The subscriber radios should be multi channel (minimum 100) synthesized type of radio having Dynamic Regrouping Talk groups capability. c. The subscriber radios should be able to perform the following tasks: i. Process call request in response to activation of the PTT switch. ii. Encode and transmit inbound service request to system. iii. Automatic switching of RF channel. iv. Generate alarm alert tones. d. The subscriber radios should include base stations, mobile/static radios and portable (handheld radios). The radios should include full keypad type. It should support but not limited to following features: i. To initiate a conversation with any subscriber radios operating in the same or multiple site system, on a one to one basis (selective call), regardless of the current group affiliation and locations of both parties. To selectively alert any subscriber radio operating in the same multisite system, regardless of the current talkgroup affiliations and location of both parties. ii. To initiate telephone interconnect call to any landline parties by keying in the land line telephone number via the radio keypad. iii. To initiate short data text messaging for any subscriber radio. iv. Radio should support Digital and AES 256 encrypted voice call. v. Radio should support IP Packets. e. All subscriber radios should come with alpha numeric display. Following information should be initiated on the display depending on the radio's mode of operation: i. Min. 12 characters should be displayed regarding called/caller radio ID/ alias. ii. The talkgroup ID/alias during a talkgroup call. iii. Call type with continuous caller ID. iv. Battery level indicator, Tx/ Rx indicator v. Received Signal Strength Indicator (RSSI) vi. Out of contact indicator vii. The numbers of the landline subscriber during a telephone interconnect call by the radio user. f. All subscriber radios should be capable of being software programmed (PC Programmable) via radio programming software. g. Over the air programming (OTAP) facility should be available to programme or through cable or better. h. Radio should support Over the Air Re-keying (OTAR) for encryption management.

	i. Offered radios should be of open standard to operate in other manufacturers Digital Open Standard System with GPS and AES 256 encryption facility.
	j. The user/mobile terminals employed in the network shall be of a type/model certified from Association of the proposed technology/ILAC/NABL accredited Government Lab with respect to ITU standards.
	k. All the specifications will be tested with the help of test equipments provided by the vendor however in case field/lab test of any specification is not possible then OEM certification should be provided to verify the same.
8.1	Open Standard Digital Static Radio:
	All Static Radios should have:
	a. Minimum 6 dB gain Static Antenna with installation clamp, surge and lightning protectors, 30 meters standard low loss RF LDF cables, patch cables and standard connectors etc. for static locations.
	b. Full alphanumeric keypad
	c. LCD/TFT/LED display
	d. Microphone with keypad
	e. Night mode for low intensity display/should have backlight or some mechanism for view in dark.
	f. Suitable SMPS Power Supply cum battery charger
	g. 03 Watt or better with internal and external speaker.
	h. 3 meters or above Battery cable with fuse and reverse polarity protection
	i. Static operation mounting brackets, screws, clamps & installation kit
	j. Digital voice and data Operation
	k. Supply Voltage: 12 V DC Nominal
	l. Temperature Range: -10°C to 55°C
	m. Ruggedness: Water & Dust IP-67 or better and Vibration resistant MIL standard 810 C,D,E,F&G.
	n. Head phone for hands free operation
	o. Protection for reverse polarity
8.1.1	Transmitter:
	a. Frequency: 400/800 MHz Band
	b. RF Power Output: Bidder to specify and programmable
	c. Channel Spacing: 12.5/25 KHz
	d. Frequency Stability: ± 1.5 PPM or better at -10°C to 55°C
	e. Output Impedance: 50 Ohms
	f. Audio Distortion: < 3% at 1 KHz, at 3 KHz deviation (clear mode)
	g. Modulation: Bidder to specify.
	h. VSWR: Better than 1.5
8.1.2	Receiver:
	a. Frequency: 400/800 MHz Band
	b. Sensitivity: -112 dBm at 5% BER or better
	c. Frequency Stability: ± 1.5 PPM or better at -10°C to 55°C
	d. Channel spacing: 12.5/25 KHz
	e. Adjacent Channel Rejection Selectivity: 60 dB or better
	f. Spurious and Image: better than 70 dB
	g. Audio output: 3 Watt or better
	h. Audio Distortion: Less than 3% at 1 KHz in mode
8.1.3	Other features:
	a. Direct mode operation
	b. Group scanning with priority selection
	c. Status Messaging

	d. Late entry
	e. Remote enable/disable facility
	f. Display with backlight: Alphanumeric
	g. Text Message using keypad (Minimum 100 character)
	h. Terminal to terminal file transfer operation @9.2 kbps data rate or better
	i. Roaming Feature within RF coverage area of the sites.
	j. Auto retry
	k. Port for headset attachment and USB cable alongwith Port for data communication and radio programming.
	l. Audio Visual Alerts (Bidder should Specify)
8.2	Digital Open Standard Mobile Radio:
	All Mobile Radios should have
	a. Minimum 3dB gain mobile RF Antenna and GPS Antenna with installation clamp, 5 meters or above standard RF co-axial cable with standard connectors for PCR vans/ other police vehicles.
	b. Full alphanumeric keypad
	c. Microphone
	d. 03 Watt or better with internal and external speaker.
	e. 3 meters or above Battery cable with fuse and reverse polarity protection
	f. Digital voice and data Operation
	g. Vehicle operation mounting brackets & installation kit.
	h. Supply Voltage: 12 V DC Nominal
	i. Temperature Range: -10°C to 55°C
	j. Ruggedness: Water & Dust IP-67 or better and Vibration resistant MIL standard 810 C,D,E,F&G
	k. Protection for reverse polarity and final PA Stage impedance mismatch
8.2.1	Transmitter
	a. Frequency: 400/800 MHz Band
	b. RF Power Output: Bidder to specify and programmable
	c. Channel Spacing: 12.5/25 KHz
	d. Frequency Stability: ± 1.5 PPM or better at -10°C to 55°C
	e. Modulation: Bidder to specify
	f. VSWR: Better than 1.5
	g. Output Impedance: 50 Ohms
	h. Audio Distortion: < 3% at 1 KHz, at 3 KHz deviation (clear mode)
8.2.2	Receiver:
	a. Frequency: 400/800 MHz Band
	b. Sensitivity: -112 dBm at 5% BER or better
	c. Frequency Stability: ± 1.5 PPM or better at -10°C to 55°C
	d. Channel spacing: 12.5/25 KHz
	e. Adjacent Channel Rejection Selectivity : 60 dB or better
	f. Spurious and Image: better than 70 dB
	g. Audio output: 3 Watt or better
	h. Audio Distortion: Less than 3% at 1 KHz in mode
8.2.3	Other features:
	a. Direct mode operation
	b. Group Call (Digital & Encrypted)
	c. Group scanning with priority selection
	d. Status Messaging
	e. Late entry
	f. Remote enable/disable facility

	g. Display with backlight – Alphanumeric
	h. Text Message using keypad (Minimum 100 character)
	i. Terminal to terminal file transfer operation @9.2 kbps data rate or better
	j. Call history
	k. Roaming Feature within RF coverage area of the sites.
	l. Auto retry
	m. Port for headset attachment and USB cable alongwith Port for data communication and radio programming.
	n. Audio Visual Alerts (Bidder should Specify)
8.3	Digital Open Standard Portable Radio
	All Hand Held Portable Radios should have
	a. Suitable Helical Antenna
	b. LCD or TFT or LED display
	c. Full alphanumeric keypad
	d. Three Li-ion minimum 2100 mAh or better batteries
	e. LED light notification
	f. Rapid single unit battery chargers for 230 Volt AC operations.
	g. Carrying Case / Belt Clip
	h. Temperature Range : -10 ⁰ C to 55 ⁰ C
	i. Ruggedness – Water, Dust and Vibration resistant MIL standard 810 C,D,E,F,G
	j. Ingress Protection IP 67/68 (Battery and Radio)
8.3.1	Transmitter:
	a. Frequency: 400/800 MHz Band
	b. RF Power Output: Bidder to specify and programmable
	c. Channel Spacing : 12.5/25 KHz
	d. Frequency Stability: ± 1.5 PPM or better at -10 ⁰ C to 55 ⁰ C
	e. Output Impedance:50 Ohms
	f. Modulation : Bidder to specify
	g. Audio Distortion: < 3% at 1 KHz, at 3 KHz deviation (clear mode)
8.3.2	Receiver:
	a. Frequency: 400/800 MHz Band
	b. Sensitivity: -112 dBm at 5% BER or better
	c. Frequency Stability: ± 1.5 PPM or better at -10 ⁰ C to 55 ⁰ C
	d. Channel spacing: 12.5/25 KHz
	e. Adjacent Channel Rejection Selectivity : 60 dB or better
	f. Spurious and Image: better than 70 dB
	g. Audio output: 500 milliwatt or better
	h. Audio Distortion: Less than 3% at 1KHz
8.3.3	Other features:
	a. Direct mode operation
	b. Group scanning with priority selection
	c. Status Messaging
	d. Late entry
	e. Remote enable/disable facility
	f. Display with backlight – Alphanumeric.
	g. Text Message using keypad (Minimum 100 character)
	h. Terminal to terminal file transfer operation @ 9.2 kbps data rate or better
	i. Call history

	j. Roaming Feature within RF coverage area of the sites.
	k. Auto retry
	l. Man Down
	m. Port for hands free kit, headset attachment and USB cable alongwith Port for data communication and radio programming..
	n. Audio Visual Alerts (Bidder should Specify)
9	Digital vehicular repeater system (for coverage enhancement:
9.1	General
	a. Frequency Band: 400/800 MHz
	b. Channel spacing: 12.5/25 KHz
	c. Half Duplex operation
	d. In-Band configurations
	e. Power supply: Bidder to quote
	f. Number of channels: Minimum 100
	g. Operating temperature: -10°C to +55°C
	h. Antenna impedance: 50 Ohm
	i. Duty cycle: Continuous
9.1.1	TRANSMITTER:
	a. Power Output: 10 W or better
	b. Max Spurious Output: -20dBm
	c. Frequency Stability: +/- 1.5ppm
	d. Audio Distortion: <2%
9.1.2	RECEIVER:
	a. Receiver Sensitivity: -115 dBm or better
	b. Frequency Stability: +/- 1.5 dBm
	c. Selectivity: 12.5 / 25 kHz 60 dB / 75 dB
	d. Intermodulation: 70 dB
	e. Audio Output (Repeater Detect Audio): 600 mV RMS nominal, flat response
	f. Audio Distortion: <2% or better
9.1.3	POWER SUPPLY: (AC & DC Operated) & Power Backup
	a. Backup: 15 hours or above
	b. Power supply: Suitable charger and sealed maintenance free battery for the requirement
9.1.4	ANTENNA
	a. Type: Multiple dipole antennas capable to adjust the dipoles
	b. Gain: 3 dB Gain or better
	c. Antenna Impedance: 50 Ohm
	d. V.S.W.R.: Less than 1.5
	e. Accessories: Suitable accessories for fixing etc.
9.1.5	CABLE
	Cable type: RF Low loss Cable – 100 Mtrs in one length & suitable Connectors both ends at less than 5dB loss or better for 100 Mtrs at 400/800 MHz band and 50 ohm impedance and suitable short cable.
10	RADIO PROGRAMMING KIT:
	a. The bidder should include in his proposal all necessary radio programming

	and Encryption Key Loading kits needed for the operation of the Digital Open Standard Trunked radio system including radio programming licensed software, interfacing hardware, laptop computer programmer and required radio terminal cables for: - Base Stations, - Static/ Mobiles - Portables - Inter site Link Equipment b. Any other kit required
11	KEY MANAGEMENT HARDWARE AND SOFTWARE: - Over the Air Rekeying (OTAR) hardware and software for Encryption with two clients. - Over the Air Programming (OTAP) hardware and software with two clients: Bidder should explain in detail how OTAP/OTAR will interface with offered system and working of OTAP/OTAR. - Key loader with interface cables for loading the encryption keys manually. Key management system should not be proprietary.
12	POWER SUPPLY: Commensurate capacity N+N redundant online UPS's with phase changeover switch for UPS and direct mains, of reputed make with maintenance free battery bank for minimum 4 hours backup for all the repeater sites and central police control room. The proposed UPSs should be very robust and reliable to provide uninterrupted power supply round the clock having following minimum features: - Input Voltage Range: 160 VAC to 280 VAC - Input Frequency Range: 47 Hz to 53 Hz - Output Voltage: 230 VAC - Output waveform: Pure Sine Wave - Voltage regulation: $\pm 1\%$ - Efficiency: $> 90\%$ - Power factor: 0.8 or better - Control Panel Display : Yes - Alarm audible & visible (in case of failure): Yes - Online monitoring: Yes - Design modular: Yes
13	TEMPERATURE MAINTENANCE SYSTEM: Temperature Maintenance System of reputed/ standardized make with all accessories, and having at least five star ratings for all repeater stations and Central Control Switch site. - Sufficient Weather Control System should be provided at each base station with automatic change over every 6 hours. - Sufficient Weather Control System should be provided at switching centre with automatic change over every 6 hours. - Weather Control System should be unmanned, so machine should be rugged, reliable, maintenance free and designed for long life. - The proposed temperature maintenance system should be able to provide sufficient cooling to the system round the clock at all locations as per system design parameters.
14	TEST EQUIPMENTS /TOOLS: License shall supply all tools, test instruments and other accessories to the testing party of Licensor and /or TEC for conducting tests, if it so desires, prior to

	commissioning of the service or at any time during the currency of the License. In the interest of security, suitable monitoring equipment as may be prescribed by the licensor for each type of system used will be provided by the Licensee at his own cost for monitoring, as and when required. The bidder should include in his bid essential test and measuring instruments & tools for proper upkeep, calibration and maintenance of the system & radios as mentioned below: - Suitable Radio Communication Test Set having all technical features of Base Station, mobile, static, handheld sets and accessories etc. for offered Trunked radio system with auto test and auto alignment facility. - Through Line Power meter etc. - Any other item essential for field testing.
15	MISCELLENOUS:
15.1	Critical Spares: The bidder shall maintain sufficient spares and enclose a list of the same for complete system including TMCSE, Repeaters, digital voice logger, inter site link equipments, dispatcher consoles, Radios etc. to ensure required availability of the network during the warranty period and CAMC period.
15.2	Earthing Policy: - Main earth shall be provided at UPS Room. Main Earth shall be terminated by the bidder at a copper strip. - The Clean Earthing arrangements for Telecom Equipment's must be protected using a mesh of copper "earth" strips of appropriate cross-sectional dimensions, forming a local Clean Earth Bus. - An earthing system (Main earth and clean earth) shall be designed to assure personnel safety and protection of installations against damage. It shall also serve as a common voltage reference and to contribute to the mitigation of disturbances. - The earthing system shall generally meet the requirements of IEEE 1100, NFPA 780, IEC 1024. - The earth resistance at any point on the Clean Earth shall be below 0.5 ohm, and that for the Main Earth shall not exceed 2.0 ohm at any location and under any soil and/or climatic condition. - All metal work and metallic items (including chassis) shall be earthed to the Main Earth to ensure the safety of personnel. - The earthing connection shall be inspected periodically at intervals frequent enough to ensure that the earth connection meets all the requirements.
15.3	Transient Protection: - Despite the provision of earthing as specified above, failure of communication equipment do occur on account of finite earth resistance during occurrence of high voltage transients. - An effective transient protection system must protect the communication equipments from transients of the following specifications as a minimum: MIL-STD-704A or equivalent.
16.	ENGINEERING SERVICES: - The finally selected Bidder shall design, supply, install, test and commission the proposed Digital Trunk Radio System. - The Bidder shall furnish complete technical details with all calculations for link engineering, planning and dimensioning of the system/network, concerned relevant literature, drawings, and installation materials regarding the applicable system.

	c. The successful bidder will be responsible for system performance to fulfill all technical requirements including a guarantee of radio network coverage and capacity, installation and programming of base station and static sites and IP based Communication Dispatch centre equipment, microwave backbone, optimization of the radio infrastructure, training of system users and maintenance personnel, and achieving satisfactory system performance. d. Acceptance tests of system components, software and equipment provided pursuant to this specification must be passed to the satisfaction of Chandigarh Police. e. Three years on site comprehensive warranty for all equipments (except portable batteries which should have minimum 18 months standard warranty and SMF batteries should have minimum 24 months standard warranty) should be provided. The warranty period will begin from the date of acceptance of entire system by Chandigarh Police. During warranty period, the system components restoration time in case of failure should be less than 2 hours however the entire system should never fail.
16.1	Installation work Plan: a. The successful bidder should submit a preliminary installation work plan, installation test and procedures and installation schedule chart. b. The bidder should provide all technical details supported by technical documents, brochures etc. for system, system component, radios, other required peripherals and accessories. c. The bidder should then work together with Chandigarh Police to finalize the work plan 15 days prior to commencement of installation.
16.2	Site preparation: a. <i>Chandigarh Police shall provide space at master site. Repeater sites locations may be selected by the bidder from the list of suggested sites given at Appendix-29 or any other sites suggested by the bidder in mutual discussion with Chandigarh Police officials. Further, in case of Chandigarh Police buildings, the bidder shall be responsible for preparation of sites for civil work and environment control at their own cost. However, Bidder has the liberty to install Repeater site on other Civil buildings other than Chandigarh Police buildings to have the desired level of signal strength as per requirement of Chandigarh Police. The, rental charges, electrical charges, maintenance charges and any other charges shall be borne by the successful bidder for the entire period of contract. These costs will be included by the Purchaser in the project cost while deciding the lowest bidder.</i> b. <i>It shall be the responsibility of finally selected bidder to install all other infrastructure/equipments necessary for the smooth functioning of master site and repeater site.</i> c. <i>The bidder should submit all equipment/ Master site/ repeater site preparation plan including Antenna installation drawings, Tower & foundation drawings, RF cabling & electrical loading drawings, routing along with earthing plan involved for total requirements of the installation.</i> <i>In case the contract is extended mutually beyond 10 years on Annual Maintenance Contract basis, the contractor shall provide complete maintenance of all the equipments including UPSs and its batteries, Temperature maintenance systems etc. supplied under the contract. The</i>

	rates of AMC beyond 10 years will be decided mutually i.e. between Contractor and Purchaser (after approval of competent authority). Further, the, rental cost of sites & other charges in respect of other than Chandigarh Police establishments will be paid by the Purchaser. The supplier shall provide the copy of rental agreement including incremental clauses of rent so that Chandigarh Police could sign separate agreement with the site owner.
	d. Bidder shall specify Load per site in KWH and number of manpower required to maintain complete sites.
	e. The bandwidth of lease line connectivity other than Chandigarh Police sites listed at Appendix-29 may also be mentioned as second level of redundancy to the sites.
	f. <i>The cost of civil/electrical work at each Repeater Site based on the network design and assessment shall be borne by the successful bidder. The civil infrastructure including self supporting masts or antenna system should be able to support wind speed of 150 KM/Hour.</i>
	g. The ownership of other civil sites shall rest with Chandigarh Police and bidder shall ensure free access to the site and in no case like delay in payment of rent or delay in any maintenance payments shall prohibit Chandigarh Police from access of the site. The responsibility shall rest with the bidder.
	h. The cost of maintenance and manpower to attend the site for day-to-day maintenance shall also be quoted by the bidder and cumulative cost of 10 years shall be included in the project cost.
16.3	System Acceptance Test:
	a. On completion of the installation, the bidder should conduct a system acceptance test. The bidder should propose a detailed system acceptance test plan, which should be jointly reviewed and finalized by Chandigarh Police and the successful bidder.
	b. The bidder should provide the test equipment required during the system acceptance test period with model number and quantity of these equipments. The bidder should repair or replace at no additional cost to Chandigarh Police, should any of the proposed equipment is found faulty during the system acceptance test period.
	c. The bidder to provide the detailed testing methodology to be adopted alongwith the test booklet procedure.
16.4	All that is required but not mentioned in this document for successful and trouble free installation, commissioning, operation and maintenance of the system, the bidder should incorporate in his bid being a turnkey project. The bidder is at liberty to indicate additional features and capabilities of the offered system.
17.	Training: The Bidder should provide training programmes for the purchaser's Engineers, Technicians and system users. Part I :- In first part Chandigarh Police will depute its twenty (10) engineers / Technicians for training at the works of the manufacturers factory premises for the period of Four (04) Weeks. In case of works out side India, all the expenses including fare, lodging and boarding should be borne by the supplier. The bidder should quote it separately. The Team of Chandigarh Police Officers should also be part of system acceptance at factory level.

	Part II:- In second part the supplier should provide Four (04) Weeks training to the 20 engineers/Technician of Chandigarh Police at the premises of Purchaser at no extra cost. Both training part should cover the following aspects: - Description of all functional assemblies of the system, including controls, indicators and monitoring system. - Line up procedures for the system and adjustment of operating parameters and other Operation and maintenance procedures. - Practical replacement procedures/practices for major assemblies including RF units. To the experienced technicians of police in the complete trouble shooting and maintenance of the equipment, both at the board replacement and preferably at the board repair level.
	Part III :- User Operational Training: - This training programme will be conducted at the user's location and will be structured so as to train up to 15 of the purchaser's supervisory and training personnel who will in turn train individual operators. - The engineers and technicians should be taught the functionality of each equipment in the system and to identify common hardware/software failures.
18	Readiness for mission critical services over broadband: The Radio system shall be able to integrate with future proposed broadband PPDR network based on 3GPP PS-LTE technology (Release 13 and above version).
19.	The proposed network shall able to support seamless addition of radio equipment of other OEM/make along with all applications already in use/operational. Bidder to provide an undertaking in this regard.

CHAPTER – 5

SPECIAL CONDITIONS OF THE TENDER ENQUIRY

1. DELIVERY PERIOD AND DELIVERY TERMS:

- a. **THE DELIVERY PERIOD FOR THE STORES:** Bidder shall follow the following schedule for executing the contract: Please note that Contract can be cancelled unilaterally by the Buyer in case items are not received within the contracted delivery period as per schedule given below:

SL. NO	DESCRIPTION OF TARGET	SCOPE	TARGET DATE (T)
1.	Date of signing the contract for indigenous seller:		T*
2.	Provision of Equipment details along with Technical Literature to DGP UT Chandigarh		T+20 days
3.	Obtaining necessary Spectrum License from WPC Wing / DOT by the user department		X**
4.	Supply and delivery of equipment at sites		T+84 -X days
5.	a. Installation of equipment(s) at CPCR . b. Commissioning of equipment(s) at CPCR .		T+168 - X days
6.	Training Schedule to be completed: A. Maintenance & Administration Training of Open Standard Digital Trunking Radio System at Buyer's location. B. Operational Training: Maintenance, fault finding, working of all features of Open Standard Digital Trunking Radio System at Buyer's location		T+188 - X days
7.	Tentative schedule for Site acceptance Test of the Network by SP Communication, Chandigarh		T+200 - X days

* T- TARGET DATE STARTS FROM "0" DAY.

** X- NO. OF DAYS FOR OBTAINING SPECTRUM LICENSE

2. **DELIVERY TERMS & CONDITIONS:** Delivery terms shall be at consignee destination (the date on which the delivery is affected at the destination mention in the contract) only the bidder is responsible for obtaining all the necessary clearances in reference to the delivery of the goods.

2.1 EXTENSION OF TIME FOR DELIVERY:-

- (i) As soon as it is apparent that delivery period/service stipulated in this contract cannot be adhered to and bidder must forthwith send an application to DGP Chandigarh Police requesting for extension of delivery date. This implies no commitment and is without prejudice to the purchaser's right. This is also without prejudice to the time being essence of the contract.

- (ii) In case, if the site is not made available for installation of supplied items during the period of delivery and installation as given in bidding document, the bidder would request purchaser in writing accompanied by “Site not Ready” certificate duly sealed and signed by the consignee for extension of installation period without liquidity damages/penalty charges.

3. TRAINING REQUIREMENTS:

The seller will provide the System Administration & management training after the successfully installation and commissioning of the offered equipment. The Seller has to provide free training after the installation and commissioning to technical officials at consignee's location as per details given below to the entire satisfaction of the consignees :-

SL NO	TYPE OF TRAINING	
1	TRAINING PROGRAM OF OPERATION & MANAGEMENT OF INSTALLED RADIO TRUNKING SYSTEM:	
A.	Maintenance & Administration Training of Open Standard Digital Trunking Radio system at Buyer's location.	02 Schedules of 10 working days each operation training for 15 officials
B.	Operational Training: Maintenance, fault finding, working of all features of Open Standard Digital Trunking Radio system at Buyer's location.	02 Schedules of 10 working days each operation training for 15 officials.

- 3.1 Training shall be in Hindi /English. Required hardware and software for training is to be arranged by seller free of cost.
- 3.2 Seller is required to provide technical operation manual for each supplied equipment.
- 3.3 Training shall also cover description of all functional assemblies of the system including flow diagram, indicators, system Administration, fault finding and monitoring system etc.
- 3.4 Seller is expected to provide training curriculum, trainer and any hardware software required. For each type of training class, the seller must describe the training to be provided, and identify what supporting training documentation will be supplied. Training descriptions must include the number of hours and days and may differentiate between theory and practical. The training schedule may be fixed mutually agreeable date and time.

4. STORES INSPECTION AND ACCEPTANCE:

4.1 JOINT RECIEPT INSPECTION

- A. The **JOINT RECEIPT INSPECTION** of delivered goods shall be conducted on arrival **AT CONSIGNEE LOCATION**. Inspection shall be carried out by **SP (Communication) Chandigarh** or his authorized representative along with authorized representative of successful bidder.
- B. Quantitative checking to verify that the quantities of the delivered goods correspond to the quantities defined in this contract as per the invoices.

- C. Complete functional / features checking of the store will be done after the successful Installation and commissioning of Open Standard Digital Trunking Radio System as per specifications in this contract and as per procedure and tests laid down by Inspection authority/respective consignees.
- D. If the tendered store is rejected during acceptance testing, the same have to be replaced.
- E. Alternatively at purchaser's option, money will be refunded positively within 30 days of issue of notice of such rejection. The consignee's right of rejection in this regard will be final and absolute.

4.2 Inspection and Tests:

4.2.1 The Factory Acceptance Test Procedure (the "Factory ATP"):

- i) The system will be fully programmed and tested in OEM's factory for System Integration. This testing will be conducted by the supplier/OEM to demonstrate the radio system features, programming and functional operation.
- ii) Customer Witnessing Test Plan: After the radio system has been stacked, racked, wired, powered, programmed and tested by the Supplier, there will be a scheduled demonstration for the Purchaser at OEM's location. At this time, five (5) nominees of the Purchaser shall witness the following test demonstrations:
 - a) The Equipment layout and wiring for all radio sites in the system.
 - b) Equipment and cable labeling.
 - c) Radio system voice and data communication operation as specified in the tender document.
 - d) Pertinent features of the Digital Trunk Radio System.
 - e) Inter site Microwave link connectivity.
 - f) Console dispatch positions in operation.
 - g) Trunking System Control and Switching Equipments (TSCSE) log-on and operation.
 - h) Mobile Radio Operation with GPS capability.
 - i) Portable Radio Operation with GPS capability.
 - j) IP voice logger.
 - k) Digital vehicular portable repeater operation.
 - l) MIS reports for system health check up and operation.
- iii) Should any inspected or tested Goods fail to conform to the Technical Specifications of the Tender, the Purchaser may reject them and the supplier shall either replace the rejected Goods or make all alterations necessary to meet the aforesaid specifications at no extra cost.
- iv) After the Purchaser's representative Witnessing the Test& approves the system operation, the Goods will be shipped.
- v) The expenditure incurred in sending the five (5) nominees of the Purchaser for the Customer's Witnessing Plan in respect of travel, accommodation, meals and local transportation shall be borne by the supplier. The bidder shall arrange FAT programme for maximum one week to ensure complete demonstration & testing of essential parameters as per schedule above.

4.3 For the acceptance of stores/equipment/systems supplier must comply with the below mentioned conditions:-

- A. The Supplier shall provide the complete technical and functional details drawings/circuitry for the individual equipment and for the complete offered system before seeking the permission of purchaser for the delivery of the system at site.
- B. The Supplier shall provide standard test procedure detail in respect of each type of equipment and the complete system after installation at site and prepare a test report in respect of each individual equipment.

This shall be compared with the factory test report supplied by Supplier to ensure that there is no deterioration in the equipment parameters during storage, transportation and installation.

- C. Complete documentation of all the measurements conducted during installation period shall be submitted by the vendor for future reference. Three copies of this documentation shall be supplied to the purchaser.
- D. The technical problems faced during installation, testing and commissioning period and their solutions shall be submitted by the Bidder at the time of handing over the completed works to Chandigarh Police. Threesets of such documentation shall be supplied.
- E. For the purpose of acceptance of the equipment /system supplied pursuant to this contract, an acceptance test shall be carried out at the Purchaser/Consignees destination site. The equipment which meets the acceptance test shall only be accepted by the purchaser.
- F. Acceptance Test at site shall be conducted of individual equipment and complete system to ensure that individual equipment and complete system meets the technical specifications and other operational and technical requirements of tender.
- G. Bidder is responsible for demonstration of all the features of proposed Open Standard Digital Trunking Radio System as mentioned in the Tender Document.
- H. The purchaser shall reject the individual equipment or complete system, if he or his representative of the opinion that the equipment or system does not meet technical specifications, operational or technical requirements. The decision of the purchaser in this regard shall be final and binding on supplier.
- I. The delivery, installation & commissioning shall not be deemed to have been completed unless all the requirements are not fulfilled as per the Tender Document and systems are accepted by the purchaser.
- J. It is bidder responsibility to remove and replace the rejected material/ item at his own cost at the time of installation and commissioning of the project at the consignee Location(s).
- K. At the time of acceptance testing at the consignee location, the bidder shall supply the installation, operation, repair and maintenance manuals of the equipment's/systems. This shall include the following:
 - i. System Interface Drawings
 - ii. System Interconnection and Block Diagrams
 - iii. Complete flow diagram
 - iv. User Operation Manuals
 - v. Equipment service /Maintenance and Troubleshooting Manuals
 - vi. Lay out drawings
 - vii. Built in Drawings
 - viii. Troubleshooting guide.

6. PAYMENT TERMS:-

The payment of bills will be made by _____ on compliance of belowmentioned mandatory conditions and submission of the following documents by the Seller to the

Paying Authority (i.e. DGP, Chandigarh Police) along with the bill:

- a. Ink-signed copy of Commercial invoice / Seller's bill in triplicate.
- b. Original Invoice.
- c. Certificate of origin from seller's chamber of commerce if any.

- d. Copy of supply order/contract
- e. Copy of Inspection note, User Acceptance certificate
- f. Bank guarantee, Performance Bank guarantee / Indemnity bond, where applicable.
- g. Delivery Period extension letter, where applicable.
- h. Details required for electronic payment viz Account holder's name, Bank name, Branch name and address, Account type, Account number, IFSC code, MICR code, PAN, GST No. The detailed performa is attached as Appendix-28.
- i. Consignee receipt Certificate in original issued by authorized representative of the consignee.
- j. Any other document / certificate required to be provided for payment as per the Supply Order / Contract.

6.1 PAYMENT SCHEDULE

Part A (90%)

- i. 40% payment of stores will be allowed (i) on receipt of the item in good and acceptable condition at consignee's end against Joint Receipt Inspection Certificate and the supplier's challan certified by the consignee and (ii) submission of performance guarantee for 5% of total contract value valid beyond 180 days of warranty and guarantee period and CAMC obligations for 10 years in shape of bank guarantee as per Clause 7 of Chapter-2.
- ii. 30% payment will be made on successful installation/commission & 100 % of services.
- iii. 20% payment will be made after successful completion of Training requirements and followed by site acceptance by the consignee

Part B (10%)

- i. Remaining 10% payment will be released as CAMC charges for 4th to 10th years in manner as mentioned below: -
@10% of B at the end of 4th year, @10% of B at the end of 5th year, @10% of B at the end of 6th year, @15% at the end of 7th year, @15% at the end of 8th year, @20% at the end of 9th year, @20% at the end of 10th year.
- ii. Payment of CAMC shall be made on annual basis after the end of each year after satisfactory operation and maintenance of the complete project.

6.1 MODE OF PAYMENT: For all suppliers, all payment will be released electronically to the account of the Indigenous firm who will be required to provide Banker details along with IFSC code and account Number along with their bid to facilitate e-payment. The required performa is attached at Appendix-28.

6.2 ADVANCE PAYMENT WILL NOT BE ALLOWED in any case. Any claim for release of payment without proper bill/invoice and supported documents as per the payment terms will not be considered by paying authority.

7. PERIOD OF GUARANTEE/WARRANTY: 3 Years from the date of successful acceptance of the system. After the expiry of warranty Annual Maintenance for the next 7 years shall be provided by successful bidder.

- 7.01 The SELLER hereby declares that the goods sold to the BUYER under this contract shall be of the best quality and workmanship and shall be strictly in accordance with the specifications and particulars contained/mentioned in the contract and the SELLER hereby guarantees that the said goods would continue to conform to the description and quality for a period of 03 years for all stores from the date of commissioning of the goods at a site to the BUYER and notwithstanding the facts that the BUYER (Inspector) may have inspected and/or approved the said goods during the aforesaid period of 03 years and if the said goods be discovered not to conform to the description and quality aforesaid or have deteriorated (the decision of the BUYER in that behalf shall be final, and binding on the parties) , the BUYER shall be entitled to reject the said goods or such portion thereof as may be discovered not to conform to the said description and quality. On such rejection, the goods will be at the SELLER's risk and all the provisions herein contained related to rejection of goods etc shall apply. The SELLER, if so called upon to replace within a period of one month or within such periods as may be extended from time to time by the User in his discretion on an application made there for by the SELLER, the whole goods or such portion thereof as is rejected by the BUYER shall be replaced and in such an event the remaining warranty period shall apply to the goods replaced from the date of replacement otherwise, the SELLER shall pay for the breach of the conditions therein contained. Nothing herein contained shall prejudice any other right of the purchaser on that behalf under this contract or otherwise.
- 7.03 If within the period of warranty as mentioned above, the items reported by the User are found to be of defective material, design, workmanship and performance or the items failed to perform as per the specification), the SELLER shall either repair or rectify the same free of charge within 30 days of receipt of notice of such defect by the SELLER or such further periods as may be mutually agreed.
- 7.04 The seller shall provide onsite warranty for all the supplied equipment's free of cost. Breakdown maintenance Service: In case of any breakdown of the equipment/system, on receiving a call from the Buyer, the Seller is to provide maintenance service to make the equipment/system serviceable.
- 7.05 During the CAMC period, the Seller shall carry out all necessary servicing/repairs to the equipment/system under CAMC at the current location of the equipment/system. Prior permission of the Buyer would be required in case certain components/subsystems are to be shifted out of location. On such occasions, before taking over the goods or components, the Buyer may ask for suitable bank guarantee from Seller to cover the estimated current value of item being taken.
- 7.06 The Buyer reserves the right to terminate the maintenance contract at any time without assigning any reason after giving a notice of 1 month. The Seller will not be entitled to claim any compensation against such termination. However, while terminating the contract, if any payment is due to the Seller for maintenance services already performed in terms of the contract, the same would be paid to it as per the contract terms.
- 7.07 The seller shall provide onsite warranty for all the supplied equipments free of cost.
- 7.08 Any item that has been replaced by the SELLER in terms of this warranty shall be returned to the purchaser.
- 7.09 The SELLER is required to provide Hardware & Software up-gradations from time to time, at mutually agreed terms. All necessary Updation / Up-gradation have to be ensured by bidder during warranty and post warranty period as part of CAMC.
- 7.10 Further, any bugs/ shortcomings detected by the purchaser/ user as well as the SELLER itself shall be rectified free of cost to BUYER during warranty period.
- 7.11 The bidder shall submit a certificate/ undertaking from the respective OEMs as specified in Bill of material (BoM), mentioning the fact that the goods supplied are covered under comprehensive warranty & support

for the prescribed period.

- 7.12 The purchaser shall give a written notice to the selected bidder stating the nature of any defect together with all available evidence thereof, Upon receipt of such notice, the selected bidder shall expeditiously cause to repair the defective goods or parts thereof or replace the defective goods or parts thereof with brand new genuine/ authentic ones having similar or higher specifications from the respective OEM, at no cost to the Purchaser. Any goods repaired or replaced by the selected bidder shall be delivered at the respective location without any additional costs to the purchaser.
- 7.13 If having been notified, the selected bidder fails to remedy the defect within the period specified, the purchaser shall impose penalty as per the penalty clause of contract. During the warranty period, the bidder shall also be responsible to ensure that the goods/ articles/ stores supplied would continue to conform to the specified quality for warranty period of 03 years without any deterioration. Bidder has to take remedial action under warranty clause on notice of Purchaser failing which penalty clause applies.
- 7.14 Nothing in clause shall in any way release the vendor from any Warranty or other obligations under this contract.
- 7.15 All the terms and conditions of CAMC are also applicable during the Warranty including penalties.
- 7.16 Successful bidder will be fully responsible for proper installation, Testing and making the equipment functional before final settlement of account.

7.17 PENALTY: -

- a) Contractor shall ensure 99.95% availability of the RF and site network connectivity in accordance with performance requirements detailed in TS. **The Availability of the network and Down time will be calculated on a Quarterly basis.** The availability and associated penalties for the period shall be governed by clause given below.
- b) The uptime/downtime calculations would be automated. The required software to calculate the uptime/downtime statics shall be placed in operation by the contractor, after approval by the employer.
- c) The total allowed Downtime is 26.28 Hours annually. The allowed Downtime is 6.5 hour quarterly.
- d) The following penalties will be imposed if the network availability falls below 99.95%

S.NO.	Network Availability	Penalty
-------	----------------------	---------

	99% ≤ Uptime < 99.9%	On every 2 hours drop in network availability beyond 6.5 hours per quarter will attract a penalty of 0.025% of total contract cost subject to a maximum of 10% of total contract cost. The system should be designed to ensure that no repeater site is failed completely under any circumstances. It should have minimum two level of fall back. In case of complete failure of services, then Downtime will be treated as full. However, in case of failure of individual component affecting the performance of site, the downtime will be calculated proportionality. In the event the uptime does not meet the required level for two (2) or more consecutive quarters. Chandigarh Police shall have the right to terminate the Agreement and do not pay any amount of the failure system of that period.
--	----------------------	--

- e) The uptime/downtime calculations should be provided by the Contractor (Service Provider) to Chandigarh Police within 15 days of the expiry of each quarter. The same will be verified by Chandigarh Police and penalties, as applicable, will be imposed.

f) The Contractor shall have to pay the penalty to the Chandigarh Police within 15 days of its imposition, failing which other remedies including legal actions may be initiated.

g) The Contractor shall also ensure the following:

Uninterrupted operation and the availability of the network shall be 99.99% during the period. The penalty in the event of breach of this clause shall be 10% of current quarter's amount payable under the contract.

3. The Contractor shall further ensure the following:-

- a. Any Base Station shall not be down by more than 5 minutes at a stretch.
- b. Not more than 10% of the total radio units should be down at any particular time.
- c. The faulty radio units should be repaired/replaced within a period of 4 hours (including travel time) during other periods.

In the event of above mentioned failures suitable action may be initiated by Chandigarh Police.

The Contractor shall keep provision of scheduled generation of reports detailing uptime, downtime of RF network as well as for complete network (including all peripheral devices such as but not limited to microwave, optical transmission equipments, power supply etc.) Service degradation instance, Site-wise performance statistics etc. All such reports shall be automatic and shall be date and time stamped.

Contractor shall provide the daily traffic statistics report indicating successful calls, unsuccessful calls (including but not limited to call lost during setup time, dropped calls, calls lost due to congestion in transmission/gateways, missed calls etc.) with details and reasons of failure. Transmission resource loading, Site wise load distribution, identification of peak loading and peak hours both on Site and system level.

8. PRODUCT SUPPORT/ SPARES:

The Seller shall agree to provide Product Support. The seller will stock the necessary spares for 10 years from the date of commissioning of all supplied items. After period of 10 years seller will suggest to Purchaser the list of spares to be purchased by Purchaser and ensure availability of spare beyond period of 10 years.

9. COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (CAMC) CLAUSE: The Seller would provide CAMC for a period of 7 years () included in the project initial cost which will commence after warranty period of three years. Payment of CAMC shall be released as per point 6.1 part B of payment schedule. The CAMC services should cover the repair and maintenance of all the equipment and systems purchased under the present Contract. The CAMC services would be provided as per the CAMC term and conditions appended at Appendix-24 of Tender.

9.1 During the CAMC period, the Seller shall carry out all necessary servicing/repairs to the equipment/system under CAMC at the current location of the equipment/system. Prior permission of the Buyer would be required in case certain components/subsystems are to be shifted out of location. On such occasions, before taking over the goods or components, the Buyer may ask for suitable bank guarantee from Seller to cover the estimated current value of item being taken.

9.2 The Buyer reserves the right to terminate the maintenance contract at any time without assigning any reason after giving a notice of 1 month. The Seller will not be entitled to claim any compensation against such termination. However, while terminating the contract, if any payment is due to the Seller for maintenance services already performed in terms of the contract, the same would be paid to it as per the contract terms.

10. TOLERANCE CLAUSE:- Purchaser reserve the right to place order on successful bidder for additional quantity upto 25% of the total number of original quantities from the same supplier at the same rate & terms & condition at which the original contract has been awarded. The bidder is bound to accept the orders for additional quantities under this clause if orders are issued at the time of placement of contract or during the currency of contract.

11. CUSTOM DUTY: - The contract is for supply, installation and commissioning, tests, trials and trainings. Hence the supplier is fully responsible for the same and should make his own arrangements for import, transport, transit insurance till safe arrival of entire goods to the consignee's premises, clearance of goods through customs, etc. He shall do so in his own name and not in the name of the purchaser, the custom duty exemption certificate may be provided by the purchaser to the supplier (if applicable).

12. Security Clause:-

A. Malicious Code Certificate:

The seller should upload following certificate in the bid:-

- (a) This is to certify that the Hardware and the Software being offered, as part of the contract, does not contain Embedded Malicious code that would activate procedures to:-
 - i. Inhibit the desired and designed function of the equipment.
 - ii. Cause physical damage to the user or equipment during the exploitation.
 - iii. Tap information resident or transient in the equipment/network.
- (b) The firm will be considered to be in breach of the procurement contract, in case physical damage, loss of information or infringements related to copyright and Intellectual Property Right (IPRs) are caused due to activation of any such malicious code embedded software.

B. As and when asked for, the firm shall share the complete Hardware (including disclosure of sourcing of critical components) / Software /firmware details of the radio communication equipment with the procurement agencies/testing agencies.

C. The firm shall cooperate with the testing agency, as designated by the procurement agencies, to provide any further details/assistance, as and when sought by them.

D. If the Radio equipment supplied by the firm fails test by Testing Agency, the Bank Guarantee of the firm shall be invoked and suitable legal action shall be initiated against the firm.

E. The firm will be blacklisted if it breached any of the above mentioned clauses.

(Sh. R K Singh)
Dy. Director DCPW
Tech. Member

(Sh. Deepak Sharma)
Assistant Prof.
Deptt. of ECE, PEC
Tech. Member

DSP/Comn.
Member

DSP/PWLC
Member

SO Accounts
Member

AC (F & A)
Member

DC (F & A)
Member

SP/Hqrs & Comn.
Member

IGP, UT Chandigarh
Chairman

BIDDER PROFILE/PARTICULARS**A. General Information:**

- i. Location of Corporate Headquarters:
- ii. Date and Country of incorporation :
- iii. Manufacturing Facility(is)
 1. Location
 2. Size
 3. Capacity
- iv. No. of Service Facility(ies) in India
 1. Location
 2. Strength
 3. Area Covered
- v. Average yearly turnover for last three years:
- vi. Geographical Distribution of the Supplier:
 1. No. of offices
 2. Locations
 3. Staff strength
- vii. Total No. of installation of the system offered.
- viii. No. of Employees
 - b) Total no.
 - c) Manufacturing
 - d) R&D (if any)
 - e) Hardware Maintenance
 - f) Software

B. Reference of Major Installation with similar products (attach documents in support, if available).

S.No.	Customer Name, Address and Telephone Number	Product Description (Number of machines installation year wise)

C. Whether the firm is cleared in respect of security by the authorised Government agency.

Signature and seal of bidder
Date _____

OFFER FORM (on Letter Head)

From :

TENDER No. _____

Dear Sir,

I/We hereby offer to supply the stores detailed in the schedule hereto or such portion thereof as you may specify in the acceptance of tender at the price given in the said schedule and agree to hold this offer open till _____, I/We shall be bound by a communication of acceptance within the prescribed time.

2. I/We have understood all the instructions to bidders in the tender enquiry and have thoroughly examined the specification drawing and/or pattern quoted in the schedule hereto and am/are fully aware of the nature of the stores required and my/our offer is to supply stores strictly in accordance with the requirements.

3. The following pages from page no.....to page no.....have been added to and will form the part of this tender _____.

Yours Faithfully,

(Signature of Bidders)

Address _____

Dated _____

Signature of Witness

Address _____

Dated _____

PERFORMA FOR GST CLEARANCE CERTIFICATE

(Enclose with Technical bid)

OFFICE OF THE GST DEPARTMENT,

No. _____ Dated _____

GST Clearance Certificate

Certified that M/s. _____

is a registered Company of this ward having Registration No. _____

The Company is assessed upto _____ and there are no dues pending against the said Company as on date.

This certificate is issued on the written request of the company, dated _____ for submission of tender purposes only.

This certificate is valid up _____

Signature & Seal of
GST OFFICER

WARD
DATE:

BID LETTER
(Enclose with Technical Bid)

To
The Director General of Police.
UT Police Headquarter,
Additional Delux building
Sector 9D, Chandigarh.

Ref: Tender No.
Sir,

We declare:

1. a) That we are manufacturers / authorized agents of _____.
a) That we /our principals are equipped with adequate machinery for production, quality control and testing of materials manufactured and used by us and that our factory is open for inspection by your representatives.
2. We hereby offer to supply the Stores at the prices and rates mentioned in the Commercial Bid.
3. **Period of Delivery, Installation & Commissioning:** We do hereby undertake, that in the event of acceptance of our bid, the **supply, installation and commissioning of the System** shall be completed at site within the specified period ----- from the date of Award of Contract (LOI), and that we shall perform all the incidental services as per contract.
4. **Terms of Delivery:** The prices quoted are inclusive of all charges upto delivery at all the locations (sites) to be indicated by Chandigarh Police.
5. We enclose herewith the complete Commercial Bid as required by you and also enclosed the Check List.
6. We agree to abide by our offer for a period of **180 days** from the date fixed for opening of the Bids and that we shall remain bound by a communication of acceptance within that time.
7. We have carefully read and understood the terms and conditions of the tender and the conditions of the Contract applicable to the tender and we do hereby undertake to supply as per these terms and conditions.
8. Certified that the Bidder is:
a sole proprietorship firm and the person signing the tender is the sole proprietor/constituted attorney of the sole proprietor, or
a JV, and the person signing the tender is from the leading partner in the JV and he has authority to refer to arbitration disputes concerning the business of the partnership by virtue of the agreement/by virtue of general power of attorney, or
a company and the person signing the tender is the constituted attorney.

NOTE: Delete whatever is not applicable. All corrections/ deletions should be duly attested by the person authorized to sign the tender document.

9. We do hereby undertake, that until a formal Contract is prepared and executed, this bid, together with your written acceptance thereof and placement of letter of intent awarding the contract, shall constitute a binding Contract between us.

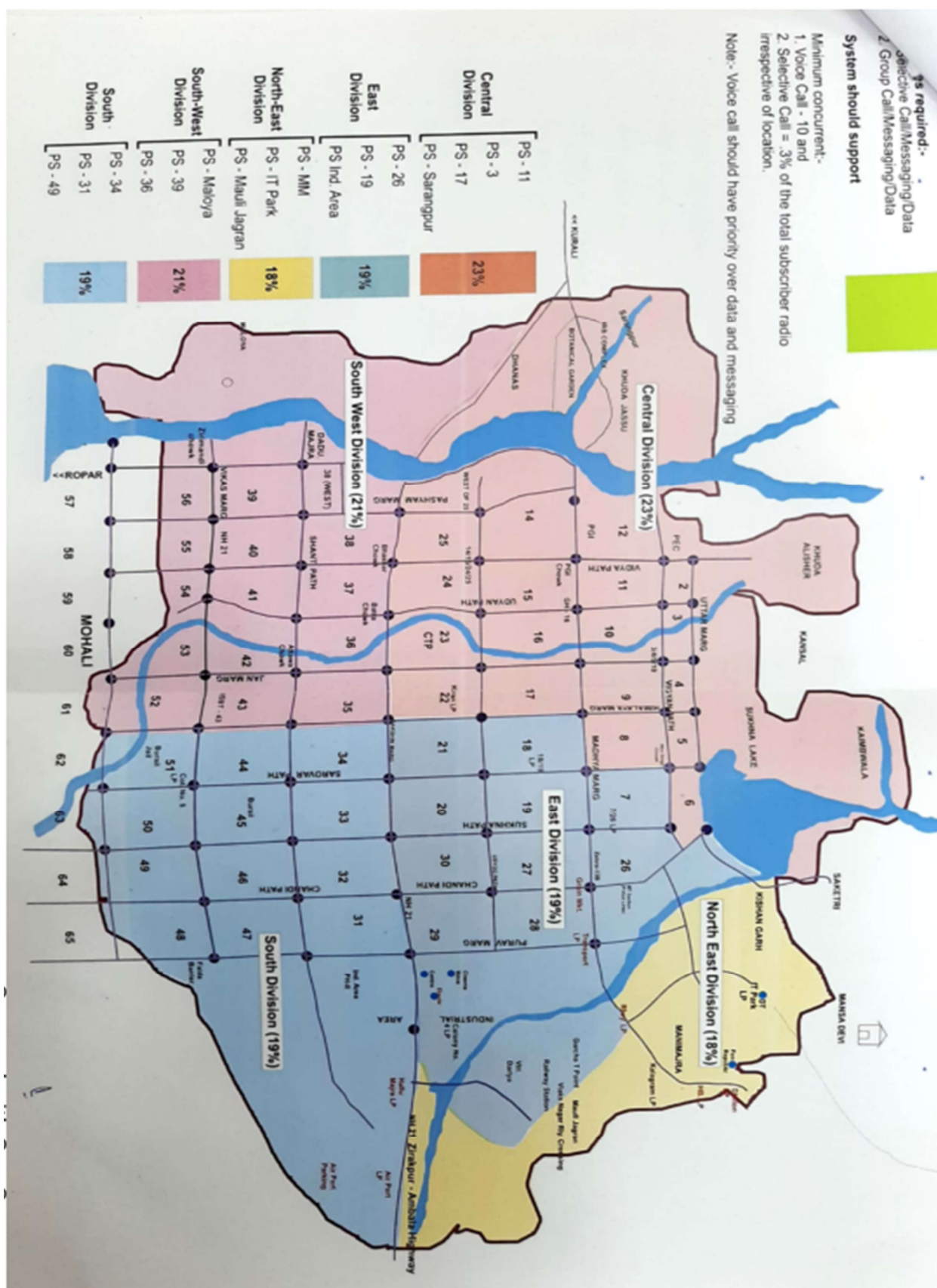
Dated this _____ day of _____ 2022.

Details of enclosures:
Telephone No.

Mobile No.

Signature of the Bidder
Full address:
Fax No. Email address:

RADIO TRAFFIC REQUIREMENT COVERAGE FIGURE



DETAILS OF BIDDER (FIRM/MANUFACTURER)**(To be filled in appropriately and if not relevant to be clearly indicated as “NOT APPLICABLE”)**

Sl. No.	Question	Answer By the Bidder	Ref Page No in the Bid Document in Support of the claim by the Bidder.
1.	Tender Enquiry No.		
2.	Whether the Tender is signed by the authorized person.(Authority letter to be enclosed)		
3.	Whether you have agreed for the Tender validity (180 days after opening of Tender) (Enclose Certificate)		
4.	Whether the Required Bid Securing Declaration Certificate has been provided before tender opening.		
5.	Whether the stores offered fully conform to the technical particulars and specification/drawings specified in the schedules to tender. If not whether the details of deviations have been mentioned in the performa for the statement of deviations as per Appendix-16.		
6.	Whether bid has been quoted from OEM /Principal directly?		
7.	If bid has not been quoted directly from OEM, then whether bid has been quoted from OEM's authorized agent?		
8.	If bid has been quoted from OEM's authorized agent, then whether authorization certificate from OEM has been enclosed with the bid as per format at Appendix-18 of tender enquiry?		
9.	Whether the offer/bid has been quoted from an intermediary agency other then OEM and his authorized agent?		
10.	Whether the Bidder /OEM have submitted separate bids for this TE.		
12.	Whether the Bidder has agreed to give the required performance security.		
13.	Bidder to clarify that the firm have satisfactory past performance.		
14.	Whether you have been debarred/blacklisted by any government authority.		

16.	Whether you have agreed to other essential condition(s) especially incorporated in the tender enquiry like terms of payments, liquidated damages clause, warranty clause.		
17.	Whether you have agreed to all terms and conditions of tender as per Tender acceptance letter at Appendix-26		
18.	Whether you have agreed to the schedule of Delivery Period as per Chapter-5 of the OTE.		
19.	Whether the Bidder is registered under the company act 1956 or a company /statutory body own by central /State Govt.		
20.	Please Confirm whether you have offered the stores i.e. Mobile Radios , Repeater stations & main Trunking Controller of Single OEM whose authorisation is submitted along with Technical Bid.		
21.	Please confirm whether you have submitted Tender specific authorisation certificate from FOEM along with valid Dealer Possession Licence from WPC.(Pse enclosed Documents)		
22.	Whether you have at least one service in India preferably in Chandigarh/NCRto ensure prompt service warranty support after sales.		
23.	Whether you have agreed to provide an undertaking/affidavit towards product support from OEM for essential spares after sales support of the offered product for a period of 10 years at least.(Pse Enclose Documents)		
24.	Whether you have average annual turnover of Rs. 30 crore during theperiod of last 3 years i.e. 2022-23, 2023-24 & 2024-2025 to meet the obligation under contract. (Pls enclose audited balance sheet for last03 years and bank's report for their credit worthiness.)	2022-23 2023-24 2024-25 Total Average -	
25.	Whether you have suffered any Financial loss for more than one year during the last three years i.e, 2022-23, 2023-24 & 2024-2025.(If Yes, Please mention)		
26.	Whether the net worth of your Firm has eroded by more than 30% in the last three financial year i.e 2022-23, 2023-24 & 2024-2025.		
27.	Whether you have successfully completed minimum one project of similar nature (Radio Trunking System) which include installation and successful implementation of trunking system in INDIA or any other country in last 05 years.(Pls Enclose Documents)		
28.	Details Of Manufacturer/ bidder		
a)	i) Name of Manufacturer/ Bidder		
b)	i) address of Manufacturer/ Bidder ii)Telephone Landline iii) Mobile No iv) Fax No v) e-mail		
c)	Works i) address ii)Telephone Landline iii) Fax No		
d)	Contact Person		

	i) address ii) Telephone Landline iii) Mobile No iv) Fax No v) e-mail		
29.	In case of foreign firm, contact person in Chandigarh/ India. i) Name ii) address iii) Name of Company iv) Telephone Landline v) Mobile No vi) Fax No v) e-mail		
30.	Please conform whether the store(s) will be supplied with packing and marking clause stipulated in the tender enquiry		
31.	Whether you have quoted for entire quantity as specified in the list of requirements as per Chapter-3		
32.	Details of the Permanent Income Tax Account Number(PAN) (Pse Enclose Copy)		
33.	Whether the latest Income Tax Clearance Certificate has been attached		
34.	Status : (a) Indicate whether you are LSU or SSI		
(b)	Are you registered with NSIC / Ministry of Home Affairs, New Chandigarh for the item quoted? If so, indicate whether there is any monetary limit on registration and also indicate validity of registration..		
(c)	If you are a Small Scale Unit registered with NSIC under Single Point Registration Scheme for subject item, whether there is any monetary limit.		
(d)	In case you are registered with NSIC under Single Point Registration Scheme for the item quoted, confirm whether you have attached an attested photocopy of the registration certificate indicating the items for which you are registered.		
35.	Banker :- i) Name ii) address iii) Telephone iv) Fax No v) e-mail vi) IFSC Code vii) MICR Code		

36.	Business name and Constitution of the firm. Is the firm registered? under :- (i) The Indian Companies Act, 1956 (ii) The Indian Partnership Act, 1932. (Please also give name of partners) (iii) Any Act; if not, who are the owners. (Please give full names and address.)		
37.	Do you agree to sole arbitration by Home Secretary, Chandigarh Administration or by other some other person appointed by him as provided in Clause 9.9.1 and 9.9.2 of Manual for procurement goods 2017, MOF (Your acceptance or non-acceptance of this clause will not influence the decision of the tender. It should, however, be noted that an omission to answer the above question will be deemed as an acceptance of the clause).		
38.	For Partnership firms state whether they are registered or not registered under Indian Partnership Act, 1932. Should the answer to this question by a Partnership firm be in the affirmative, please state further:- (a) Whether by the partnership agreement, authority to refer disputes concerning the business of the partnership to arbitration has been conferred on the partner who has signed the tender.		
	(b) If the answer to (a) is in the negative, whether there is any general power of attorney executed by all the partners of the firm authorizing the partner who has signed the tender to refer dispute concerning business of the partnership to arbitration.		
	(c) If the answer to either (a) or (b) is in the affirmative, furnish a copy of either the partnership agreement or the general power of attorney as the case may be. N.B.: (1) Please attach to the tender a copy of either document on which reliance is placed for authority of partners or the partner signing the tender to refer disputes to arbitration. The copy should be attested by a Notary Public or its execution should be admitted by Affidavit on a properly stamped paper by all the partners. (2) Where authority to refer disputes to arbitration has not been given to the partner signing the tender the bids must be signed by every partner of the firm.		

39.	Here state specifically: (i) Whether the price tendered by you is to the best of your knowledge and belief, not more than the price usually charged by you for stores of same nature/class or description to any private purchaser either foreign or as well as Govt. purchaser. If not state the reasons thereof if any. Also indicate the margin of difference. (ii) In respect of indigenous items for which there is a controlled price fixed by law, the price quoted shall not be higher than the controlled price, and if the price quoted exceeds the controlled price the reasons thereof should be stated.		
40	Are you. (i) Holding valid Industrial License(s)/Registration Certificate under the Industrial Development and Regulation Act, 1981. If so, please give particulars of Industrial Income Registration Certificate. (ii) Exempted from the licensing Provision of the Act for the manufacture of item quoted against this tender. If so, please quote relevant orders and explain your position. (iii) Whether you possess the requisite license for manufacture of the stores and/or for the procurement of raw materials belonging to any controlled category required for the manufacture of the store? In the absence of any reply it would be assumed that no license is required for the purpose of raw materials and/or that		
41.	If you are participating under Preference to Make-In India order 2017 then: a) Whether You have submitted appropriate documentary proof for a valid /Approved ongoing “make-In – India” agreement /Program . (Enclosed Documents)		
	b) Whether you(The Local Supplier/Bidder seeking the benefit under Purchase/Price Preference), have provided self certification that the item offered meets the minimum local content and provided details of the location(s) at which the local value addition is made. (Enclosed Documents)		
	c) Whether your foreign “Make-in- India” associates meets all the criteria above without exemption. (Enclosed Documents)		

	d) Whether you have been debarred by any procuring entity for violation of Make –in- India order (Enclosed Documents)		
	e) Whether the Bidder (manufacturer or principal of authorized representative) furnished along with the bid a legally enforceable undertaking jointly executed by himself and such foreign manufacturer for satisfactory manufacture, Supply (and erection / commissioning and performance of 'the product' offered including all warranty obligations as per the general and special conditions of the bid document. (Enclosed Documents)		
42	Name and full address of the Banker to the foreign manufacturer and the Indian agent.		
43.	Local Content If stores offered are manufactured in India, please state whether all the raw materials, components etc. used in their manufacture are also produced in India. If not, give details of materials components etc. that are imported and their breakup of the indigenous component in percentage (%) & Imported components in percentage (%) together with their value & proportion it bears to the total value of the store should also be given.		
44.	State whether raw materials are held in stock sufficient for the manufacture of the stores		
45..	Please indicate the stocks in hand at present time (i) Held against this enquiry (ii) held by M/s.....over which you have secured an option		
46..	In case of foreign firm quoting directly please indicate:- a) The name of the Indian Agent(s)/Associates(s) for after sale-service in India		
	b) The quantum of the commission payable to the Indian agent along with copy of the agency agreement.		
47.	What is the precise relationship between the foreign manufacturer/principal and the Indian Agent/Associates; a) The mutual interest which the manufacturer/principal and the Indian Agent(s)/Associate(s) have in the business of the each other.		
	b) Any payment which the Indian Agent(s)/Associate(s) will receive from the foreign manufacturer/principal abroad whether as a commission for the contract or as a general retainer fee;		

	c) Indian Agent's Permanent Income Tax Account No.		
	d) The foreign principal's/manufacture's Permanent Income Tax Account No.		
	e) Whether certificate has been furnished that the net prices are exclusive of commission/profit etc. to be paid to the principal/manufacture in Indian currency and the amount of the agency commission which the Indian Agent(s)/Associate(s) are entitled in terms of the agreement with the foreign principal has been indicated separately;		
	f) Whether foreign manufacturer's/principal's performa invoice (indicating, inter-alia, the remuneration/commission/discount etc. to be allowed in a particular transactions to the Indian Agent(s)/Associate(s) has been enclosed		
48.	State whether business dealings with you have been banned by Ministries/Department of Supply/Ministry of Home Affairs		
49.	Please confirm that you have read all the instructions carefully and have complied with the instructions accordingly.		
50..	Whether you unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.		

Signature of the Tenderer: _____

(1) Full name and Address of the person signing (in block letter

(2) Whether signing as Proprietor/ Partner/Constituted Attorney/Duly authorized by the company_____

Signature of witness:

Full name and address of the Witness (in block letters)

N.B:- BIDDERS SHOULD FURNISH SPECIFIC ANSWERS TO ALL THE QUESTIONS .BIDDERS MAY PLEASE NOTE THAT IF THE ANSWERS SO FURNISHED ARE NOT CLEAR AND/OR ARE EVASIVE, THE BID WILL BE LIABLE TO BE REJECTED.

COMPLIANCE TO TECHNICAL SPECIFICATION

1. Name of Item: _____
2. Brand of Item/Country of origin: _____
3. Make & Model: _____

Tenderer are requested to give Compliance of each Specification whether equipment being offered by them is complying with Specification or otherwise.

QRs compliance for _____

Para of Tender enquiry specifications	Specification as per OTE	Compliance to OTE/Tender specification whether Yes or No	Confirmation of the specification in page/para of the brochure / technical literature (wherever such brochure is required to confirm the specifications)	In case of non-compliance, deviation from OTE to be specified in unambiguous terms
1	2	3	4	5

Signature of the tenderer

N.B.- Bidders can furnish this statement on a larger sheet of paper if space provided above is found insufficient.

QUESTIONNAIRE ABOUT MANUFACTURER

(PLEASE MARK IN APPROPRIATE BOX AND FILL THE ANSWER CORRECTLY. BIDS LEAVING THE BOX UNMARKED AND QUESTIONNAIRE UNANSWERED SHALL BE REJECTED)

1. Name and address of Bidder _____

2. a) Whether registered with NSIC for subject store. _____

YES

NO

b) If yes, Monetary limit
(Enclose Photocopy of
Regn. Certificate)

c) Validity Date

--	--	--	--	--	--	--	--

4. Whether past supplier of subject store
to DGS&D or Min. of Home Affairs or any
other Govt organization during the last 5
years. (If yes, submit performance report in
enclosed performa)

YES

NO

5. Terms of delivery: **(FREE DELIVERY AT CONSIGNEE'S LOCATIONS)**

YES

NO

6. Whether any levies extra **(TO BE MENTIONED IN PRICE BID)**

7. Whether any tax Extra **(TO BE MENTIONED IN PRICE BID)**

8. Discount offered if any

9. (a) Delivery period in months from _____
date of placement of order _____ Month
(b) Monthly rate of supply _____
(c) Delivery period after opening of LC _____ Months

10. (a) Whether stored fully conforms to
tender schedule specifications in
all respects.

YES

NO

(b) If answer to 11(a) is No. Indicate the
details of deviation in separate sheet.

11. Acceptance to conditions of contract as
per GFR 2017 and Manual for procurement of Goods
2017 published by Ministry of Finance.

YES

NO

12. Have you enclosed required Bid securing declaration certificate

YES

NO

13. Do you accept tolerance clause.

YES

NO

14. Do you accept Liquidated Damage clause

YES

NO

15. Do you accept Arbitration clause

YES

NO

Signature of the Tenderer_____

Name in Block Letters_____

Capacity in which Tender signed_____

Full Address._____

PERFORMANCE STATEMENT FOR LAST THREE YEARS

Serial. No.	Name of Firm	Contract No.	Description of Stores	Quantity on order	Value of order	Original D.P.	Qty. supplied within original D.P.	Final/ Ext. D.P.	Has the equipment been satisfactorily commissioned & is it giving trouble free service	Reasons for Delay in supplies (If any)

- i) Manufacturer /Supplier should give proof of documents to establish that similar equipment functioning satisfactorily at the supplied locations, at least for last 05 years.
- ii) Bidder should submit Balance Sheet for last 03 years.

N.B: (i) The decision on assessment of past performance of -----(**Designation of Procurement Officer**) will be final.

(ii) Copy of supply order be attached.

Signature of tenderer

Date

Name of tenderer

BID SECURING DECLARATION CERTIFICATE

To,

The Director General of Police.
UT Police Headquarter,
Additional Delux building
Sector 9D, Chandigarh.

Tender: No _____,
Sir,

We, M/s _____ undertake that if we withdraw or modify our bid during the period of validity, or we are awarded the contract and we fail to sign the contract, or to submit a performance security before the deadline defined in bids document, we will be suspended for the period of 02 years from being eligible to submit bids for contract with the procuring entity i.e. Chandigarh Police.

Yours faithfully

(Signature of the Authorised Signatory of Bidder, with Official Seal)

GUARANTEE / WARRANTY

- i) The contractor/seller hereby declares that the goods, stores articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained / mentioned in contract.
- ii) The contractor/seller hereby guarantees that the said goods/stores/articles would continue to conform to the description and quality aforesaid for a period of 03 years, from the date of delivery of the said goods/stores/articles to the purchaser and that notwithstanding the fact that the Purchaser (Inspector) may have inspected and/or approved the said goods/stores/articles, if during the aforesaid period of 03 year the said goods/stores/articles be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated and the decision of the purchaser in that behalf shall be final and binding on the contractor/seller.
- iii) The purchaser shall be entitled to call upon the contractor/seller to rectify the goods/stores/articles or such portion thereof as is found to be defective by the purchaser within a reasonable period, or such specified period as maybe allowed by the purchaser in his discretion on an application made thereof by the contractor/seller, and in such an event, the above mentioned warranty period shall apply to the goods/stores/articles rectified from the date of rectification thereof, otherwise the contractor/seller shall pay to the purchaser such compensation as may arise by reason of the breach of the warranty herein contained.
- iv) If within the period of warranty, the goods are reported by the Buyer to have failed to perform as per the specifications, the Seller shall either replace or rectify the same free of charge, within a maximum period of 60 days of notification of such defect received by the Seller, provided that the goods are used and maintained by the Buyer as per instructions contained in the Operating Manual. Warranty of the equipment would be extended by such duration of downtime. Record of the down time would be maintained by the user in the logbook. Spares required for warranty repairs shall be provided free of cost by the Seller. The Seller also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the
- v) Buyer and the Seller.
- vi) Warranty to the effect that before going out of production for the spare parts they will give adequate advance notice to the purchaser of the equipment so that the latter may undertake the balance of the lifetime requirements.
- vii) Warranty to the effect that they will make available the blueprints of drawings of the spares if and when required in connection with the main equipment.
- viii) The contractor/seller hereby declares that the goods, stores articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained / mentioned in contract.

- ix) The purchaser shall be entitled to call upon the contractor/seller to rectify the goods/stores/articles or such portion thereof as is found to be defective by the purchaser within a reasonable period, or such specified period as maybe allowed by the purchaser in his discretion on an application made thereof by the contractor/seller, and in such an event, the above mentioned warranty period shall apply to the goods/stores/articles rectified from the date of rectification thereof, otherwise the contractor/seller shall pay to the purchaser such compensation as may arise by reason of the breach of the warranty herein contained.
- x) If within the period of warranty, the goods are reported by the Buyer to have failed to perform as per the specifications, the Seller shall either replace or rectify the same free of charge, within a maximum period of 60 days of notification of such defect received by the Seller, provided that the goods are used and maintained by the Buyer as per instructions contained in the Operating Manual. Warranty of the equipment would be extended by such duration of downtime. Record of the down time would be maintained by the user in the logbook. Spares required for warranty repairs shall be provided free of cost by the Seller. The Seller also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the Buyer and the Seller.
- xi) Warranty to the effect that before going out of production for the spare parts they will give adequate advance notice to the purchaser of the equipment so that the latter may undertake the balance of the lifetime requirements.
- xii) Warranty to the effect that they will make available the blueprints of drawings of the spares if and when required in connection with the main equipment.
- xiii) The contractor/seller hereby declares that the goods, stores articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained / mentioned in contract.
- xiv) The contractor/seller hereby guarantees that the said goods/stores/articles would continue to conform to the description and quality aforesaid for a period of 03 years, from the date of delivery of the said goods/stores/articles to the purchaser and that notwithstanding the fact that the Purchaser (Inspector) may have inspected and/or approved the said goods/stores/articles, if during the aforesaid period of 03 year the said goods/stores/articles be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated and the decision of the purchaser in that behalf shall be final and binding on the contractor/seller.
- xv) The purchaser shall be entitled to call upon the contractor/seller to rectify the goods/stores/articles or such portion thereof as is found to be defective by the purchaser within a reasonable period, or such specified period as maybe allowed by the purchaser in his discretion on an application made thereof by the contractor/seller, and in such an event, the above mentioned warranty period shall apply to the goods/stores/articles rectified from the date of rectification thereof, otherwise the contractor/seller shall

pay to the purchaser such compensation as may arise by reason of the breach of the warranty herein contained.

- xvi) If within the period of warranty, the goods are reported by the Buyer to have failed to perform as per the specifications, the Seller shall either replace or rectify the same free of charge, within a maximum period of 60 days of notification of such defect received by the Seller, provided that the goods are used and maintained by the Buyer as per instructions contained in the Operating Manual. Warranty of the equipment would be extended by such duration of downtime. Record of the down time would be maintained by the user in the logbook. Spares required for warranty repairs shall be provided free of cost by the Seller. The Seller also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the Buyer and the Seller.
- xvii) Warranty to the effect that before going out of production for the spare parts they will give adequate advance notice to the purchaser of the equipment so that the latter may undertake the balance of the lifetime requirements.
- xviii) Warranty to the effect that they will make available the blueprints of drawings of the spares if and when required in connection with the main equipment.

Signature of Bidder

Date

FINAL ACCEPTANCE CERTIFICATE BY THE CONSIGNEE

To,

M/s.....

.....

.....

Subject: Certificate of commissioning or equipment / plant and training.

This is to certify that the equipment(s)/plant(s) as detailed below has/have been received in good conditions along with all the standard and special accessories and a set of spares (subject to remarks in Para No.02) in accordance with the contract/technical specifications. The same has been installed and commissioned. The firm has also imparted training programme as per terms and conditions of contract at the best satisfaction of the user.

(a) Contract No.....Dated.....

(b) Description of the equipment(s)/Plant:.....

(c) Equipment(s)/Plant(s) Nos.....

(d) Quantity:

(e) Bill of Loading/Air Way/Railway Receipt/Goods Consignment Note
No.....

(f) Name of Vessel/Transporters:

(g) Name of Consignee:

(h) Date of Commissioning and proving test:

(i) Details of Accessories / spares not yet supplied and recoveries to be made on that account.

(j) The proving test has been done to our entire satisfaction and operators have been trained to operate the equipment(s) / plant(s).

(k) Whether the receipt of store was within the stipulated time of delivery.

(l) If delivery was not given within the stipulated time, was delivery period extended from the competent authority.....

Signature of Consignee

PERFORMA FOR EQUIPMENT AND QUALITY CONTROL

EMPLOYED BY THE MANUFACTURER

Bid No. _____ Date of opening _____

Name of the Bidder _____

(Note: All details should relate to the manufacturer for the items tendered)

1. Name & full address of the Manufacturer.
2. Telephone & Email Office/Factory//Works
3. Telegraphic address
4. Location of the manufacturing factory.
5. Details of Industrial License, wherever required as per statutory regulations.
6. Details of important Plant & Machinery functioning in each Dept. (Monographs & description pamphlets to supplied if available.)
7. Details of the process of manufacture in the factory.
8. Details & stocks of raw materials held.
9. Production capacity of item(s) quoted for, with the existing plant & machinery
 - 9.1 Normal
 - 9.2 Maximum
10. Details of arrangement for quality control of products such as laboratory, testing equipment etc.
11. Details of staff.
 - 11.1 Details of technical supervisory staff in charge of production & quality control.
 - 11.2 Skilled labour employed.
 - 11.3 Maximum No. of workers (skilled & unskilled) employed on any day during the 18 months preceding the date of Bid.
12. Whether Goods are tested lot any standard specification, if so, copies of original test certificates should be submitted in triplicate.

Signature and seal of the Manufacturer/Bidder

Date _____

PERFORMA FOR STATEMENT OF DEVIATIONS

The following are the particulars of deviations from the requirements of the instructions to bidders as contained in the General conditions of Contract and the T/E specifications and terms and conditions:-

STATEMENT OF DEVIATIONS FROM THE GENERAL CONDITIONS OF CONTRACT AND THE TENDER ENQUIRY TERMS AND CONDITIONS:-

CLAUSE	DEVIATION	REMARKS

II. **STATEMENT OF DEVIATIONS FROM THE TENDER ENQUIRY SPECIFICATIONS:-**

S.No	DESCRIPTION OF ITEM SPECIFICATION WHERE DEVIATING (with respect to clauses and sub clauses of Tender Document)	DEVIATION IN THE OFFER	BRIEF REASON FOR THE DEVIATION, Advantage/Disadvantage, If Any

SIGNATURE AND SEAL OF THE MANUFACTURER/TENDERER

NOTE: Where there is no deviation the statement should be returned duly signed with an endorsement indicating "No Deviations"

SCHEDULE OF DELIVERY

SL. No	ITEM	QUANTITY DESCRIPTION	DELIVERY DATE

Signature and seal of bidder

Date_____

PERFORMA FOR AUTHORITY FROM MANUFACTURERS

To,

The Director General of Police.
UT Police Headquarter,
Additional Delux building
Sector 9D, Chandigarh.

Subject:- _____

Sir,

Please refer to your e-tender enquiry (NIT) No- _____ dated.....

1. We _____ who are proven and reputable Manufacturers of _____ (name and description of the goods offered in the tender) having factories at _____ hereby authorize M/s _____ (name and address of the agent) to submit a tender, process the same further and enter into a contract with you against your requirement as contained in the above referred tender enquiry documents for the above said goods manufactured by us.
2. We further confirm that no supplier or firm or individual other than M/s _____ (name and address of the above agent /dealer) is authorized to submit tender, process the same further and enter into contract with you against your requirement as contained in the above referred tender enquiry documents for the above said goods manufactured by us.
3. We also hereby extend our full warranty, support as per the conditions of contract, read with modifications, if any, in the special conditions of contract for the goods and services offered for supply by the above firm against this tender enquiry document.

Yours faithfully,

Signature with date, name and designation

For and on behalf of M/s _____
(Name and address of the Manufacturers)

Note:-

- a) This letter should be on the letter head of the manufacturing firm and should be signed by the person who is competent having the power of attorney
- b) Scan copy of the original letter must be attached with tender documents.

Signature of the Bidder.

PERFORMA FOR INDUSTRY STANDARD BENCHMARK RESULTS

Item	Bench Mark	Performance	Deviation	Source Date

Signature and seal of bidder

Date _____

PERFORMA OF GUARANTEE FOR SUPPLY OF SPARES DURING POST WARRANTY PERIOD

To,

The Director General of Police.
UT Police Headquarter,
Additional Delux building
Sector 9D, Chandigarh.

Dear Sir,

In consideration of the President of India through the DGP UT Chandigarh (hereinafter referred to as the 'Purchaser' which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assignees) having awarded to M/s _____ with its Registered/Head Office at _____ (hereinafter referred to as the 'Supplier' which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assignees), a contract by issue of the Purchaser's letter of Award No. _____ dated _____ entering into a formal contract to that effect with the Purchaser on _____ vide Agreement dated _____ (hereinafter referred to as the contract).

We, the supplier hereby give a guarantee for the supply of all necessary spares as demanded by the (DGP UT Chandigarh)) for the routine and emergency maintenance of the System being supplied by us to Chandigarh Police **for a period of not less than 7 years after the warranty period of 03 (Three) years and lifetime spares thereafter in case asked for by the purchaser.**

We further clarify that for the first 03 (Three) years i.e. warranty period of 03 (Three) years, we are covered by the warranty clause as mentioned in Annexure_. For the remaining period of 07 (Seven) years and thereafter for the life time, a detailed list of spares will be supplied to the purchaser for the purpose of enabling him to decide list of spares needed for routine and emergency maintenance of the System. This guarantee shall not be revocable under any circumstances.

Date this _____ day of _____ 20_____. At _____

WITNESS

(Signature) _____

Signature and seal

Name: _____

For & on behalf of M/s _____
(Name of Manufacturers)

(Enclosed with Technical Bids)

CHECK LIST – TECHNICAL BID

S.No.	Particulars	
1.	Have you purchased the tender document	Yes/No
2.	Have you furnished Bidder's Particulars as per Appendix-1	Yes/No
3.	Have you furnished Price Bid Form (In Excel sheet on CPP portal)	Yes/No
4.	Have you furnished Bid Securing Declaration Certificate.	Yes/No
5.	Have you filled in Appendix-16 clearly mentioning all technical deviations.	Yes/No
6.	Are you offering the goods & services as per delivery schedule	Yes/No
7.	Have you furnished Manufacturer's Authorization Appendix-18.	Yes/No
8.	Have you given Income-tax clearance certificate	Yes/No
9.	Have you furnished the guarantee for supply of spares in the post warranty period as per Appendix-20.	Yes/No
10.	Have you signed and sequentially numbered each page of your Bid.	Yes/No
11.	Submitted a copy of Tender duly signed on each page?	Yes/No
12.	Submitted document sequentially Numbered	Yes/No
13.	Index of the submitted document	Yes/No
14.	All the forms in the Tender Document signed & enclosed	Yes/No

Signature_____

Name _____

Designation with Stamp

PERFORMA OF CERTIFICATE FOR COMMISSIONING OF THE SUPPLIED GOODS/ITEMS

No.

Date:

M/s_____

Sub:- Certificate of commissioning of supplied goods/items.

1. This is to certify that the Items as detailed below has been received in good order and condition along with all the hardware and software, standard and special accessories (Configuration/Specifications). The same has been installed and commissioned.

- a. Contract No._____Dated_____
- b. Description_____
- c. Quantity_____
- d. Quantity_____
- e. Bill of Lading_____
(For Import Contract)
- f. Name of the vessel/transporter_____
- g. R/R No._____Date_____
- h. Name of the Consignee_____
- i. Date of Commissioning & Proving Test_____

Details of Accessories/parts etc., not yet supplied and recoveries to be made on that account.

S.No.	Description	Amount to be recovered
-------	-------------	------------------------

The proving test has been done to our entire satisfaction and operator have been trained to use the hardware and the software

PURCHASER

BIDDER

The supplier has fulfilled his contractual obligations satisfactorily***

Or

The supplier has failed his contractual obligations with regard to the following.

- a)
- b)
- c)
- d)

The amount of recovery on account of non supply of accessories and parts is given under para No.2.
The amount of recovery on account of failure of the supplier to meet his contractual obligation is as indicated in endorsement of the letter.

Signature_____
Name_____
Designation with Stamp

***Explanatory notes for filling up the certificates :

- 1) Points to be considered while filling up para no.4 of the certificate on contractual obligations of the supplier.
 - a) He has adhered to the time schedule specified in the contract in dispatching the documents.
 - b) He has installed and commissioned the units in time i.e. within the period specified in the contract from the date of the intimation by the purchaser in respect of the installation and commissioning of the units.
 - c) Training of personnel as per contractual obligation by the supplier has been done.
 - d) In the event of documents having not been supplied or installation and commissioning of the plant have been delayed on account of the supplier, and trainings have not been imparted and the literatures/specifications/manuals have not been supplied, and the extent of delay should always be mentioned.

Signature_____

Name _____

Designation with Stamp

PERFORMA FOR INFORMATION IN RESPECT OF PREVIOUS SUPPLY BY BIDDER**PART-I: SUMMARY:**

Year / Month	No. of Trunking/Similar Project commissioned	Clients

PART-II: Details of each supply mentioned in Part-I

1.0	Brief project decryption	
2.0	Location where installation done	
	• Country • Town (s)	
3.0	Address of the client	
	• Contact Address • physical Address • Tel Nos., Fax Nos. & Email ID	
4.0	Client's key contact persons	
	• Name (s) • Designation • Telephone No. & Email ID	
5.0	Project Schedule	
	• Commencement date • Completion date • Reasons for delay, if any	
6.0	Project cost	
7.0	No. of Technical staff deployed by the company/firm for the project	
8.0	Third party firm(s) involved with project	
	• Name(s) • Roles and responsibility of the firm • contact Address • Physical Address • Tel Nos., Fax Nos. & Email ID	
9.0	Scope of supply / service(equipment, maintenance – comprehensive or otherwise, software upgrades, long term G/W, etc)	
10.	State any challenges or problems experience by yourselves during project implementation or do you have any suggestion to make	

Signature _____
Name _____

Designation with Stamp

Part-III: The bidder should submit copy of the contract secure during the last FIVE years for the quoted products across the country, wherein cost of the products, duties & Taxes and original delivery period / extended delivery period / final extended delivery period (if any) should be clearly indicated . They should also provide copy(ies) of performance certificates issued by the end user in India for satisfactory execution of contracts and performance of equipment.

Signature _____
Name _____

Designation with Stamp

COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT For Open Standard Digital Trunking Radio System

This contract is made on...../...../20__ at Chandigarh between the President of India represented by Shri....., DGP UT Chandigarh (herein after referred to as "User" which expression shall unless excluded by or repugnant to the context be deemed to include his successor in office or assigns) of the FIRST PART.

AND

M/S_____, having its registered office at _____, India represented by _____ SECOND PART.

WHEREAS

- A. The user is desirous for the Comprehensive Annual Maintenance Contract **Open Standard Digital Trunking Radio System** installed at **CPCR, Police Headquarter, sector 9, Chandigarh** (hereinafter referred to as the "AMC") and had issued an invitation to _____ requesting for Technical/Commercial proposal for the same.
- B. With respect to the invitation issued by the user, M/S_____ had submitted its Technical/commercial proposal.

NOW, THEREFORE in consideration of the mutual promises and covenants contained herein, the parties agree as follows:

1. DEFINITIONS OF TERMS

In this contract, capitalized words will have the same meaning as respectively assigned to them in the conditions of the Contract herein.

2. ORDER OF PRECEDENCE :

In case of conflict between the terms in this contract and the Contract documents, the terms of this Contract shall prevail. In case of conflict between the terms in any two Contracts Documents, the Contract Document mentioned later in the above list shall prevail.

3. SCOPE OF WORK

- 3.1 The scope of work shall include comprehensive on site annual maintenance/repair/preventive maintenance services of the entire system (with no hidden cost) of **Open Standard Digital Trunking Radio System** of Chandigarh Police installed at CPCR, Police Headquarter, Sector 9D, Chandigarh for a period of _____ year w.e.f _____
- 3.2 All the **Open Standard Digital Trunking Radio System** equipments at CPCR, Police Headquarter, Sector 9D, Chandigarh should be covered under AMC, which are supplied and installed by M/s_____.
- 3.3 If the performance of any individual equipment or system fails to meet the operational requirement then the same shall be replaced/repared immediately free of cost during the term of AMC period. The user will ensure proper operating environment like input A.C. supply, ambient temperature etc.
- 3.4 M/s_____ shall keep the sufficient stock of spare parts/equipment to ensure their availability during pre/Post Warranty period.
- 3.5 All the faults appearing and there rectification shall be periodically informed to the user and to be recorded.

- 3.6 The defective card/equipment should be replaced immediately at the site. In case of major defects requiring the defective card /equipment to be taken to out for repair then same shall be returned within 45 days, if the equipment/card could be repaired in India. If the item has to be sent outside India then the same will be returned back within 90 days duly repaired. No import/Export assistance shall be provided by the user. Till that time M/s _____ will ensure uninterrupted services/traffic of **Open Standard Digital Trunking Radio System**. In case item is not returned after repair within above mentioned time frame then the payment due on account of half-yearly AMC charges will be withhold until the repaired component is returned. _____ will provide a suitable replacement during the intervening period. All liabilities towards the transportation etc for above mentioned cards / equipments will be borne by M/S _____.
- 3.7 The details of contact person(s) to be contacted for any CAMC related issues including during failure of equipments.

4. PAYMENT SCHEDULE

- 4.1 The payment of AMC charges shall be made periodically as per point 6.1 part B of payment schedule after successful completion of the job every year within 30 days after the submission of In-Voice for annually.
- 4.2 In case the user does not arrange to release the annual CAMC payment within additional 30 days of grace period _____ is free to suspend further AMC services till the pending payment is released. No services will be suspended if payment is withhold on account of clause 3.7. M/s _____ will give two weeks notice before suspension of services, if any, in writing.

5. PERIOD OF CONTRACT

The contract shall be valid for a period of _____ with effect from _____ till _____ and renewed annually upto 7 years of post-warranty period based on satisfactory performance of service provider.

6. FORCE MAJEURE

- 6.1 Neither the M/s _____ nor the User shall be responsible for delays or lack of performance resulting from events of force majeure which shall include but not limited to fire, earthquake, flood, epidemic etc. as events recognized as Force Majeure .
- 6.2 A party claiming Force Majeure shall exercise reasonable diligence to mitigate the effects of a force majeure event on the performance of its obligations under the contract. The affected party shall promptly notify the other party as soon as the Force Majeure event has been removed and no longer prevents the affected party from performing its obligations which have been suspended and the affected party shall thereafter resume performance of such obligations as soon as possible.
- 6.3 The party asserting the claim of force majeure shall have the burden of proving that the circumstances constitute valid grounds of force majeure under this clause and that such party has exercised reasonable diligence and efforts to mitigate the consequences of any alleged Force Majeure.
- 6.4 The party claiming Force Majeure shall promptly inform the other party in writing and shall furnish within one week of its occurrence sufficient proof of the occurrence and estimated duration of such Force Majeure.

- 6.5 In the event of force Majeure, the parties shall immediately consult with each other in order to find an equitable solution and shall use all reasonable endeavors to minimize the consequences of such Force Majeure.

7. PENALTY :-

- a) Contractor shall ensure 99.95% availability of the RF and site network connectivity in accordance with performance requirements detailed in TS. The Availability of the network will be calculated on a Quarterly basis. The availability and associated penalties for the period shall be governed by clause given below.
- b) The uptime/downtime calculations would be automated. The required software to calculate the uptime/downtime statics shall be placed in operation by the contractor, after approval by the employer.
- c) The following penalties will be imposed if the network availability falls below 99.95%

S.NO.	Netwok Availability	Penalty
2.	$99\% \leq \text{Uptime} < 99.95\%$	For every 0.01% of downtime lower than 99.95 % a penalty of 0.1% of current quarter's amount payable under the agreement shall be levied as penalty on the contractor for the quarter subject to maximum of 10% of current quarters amount payable under agreement.
3.	$97\% \leq \text{Uptime} < 99\%$	A penalty of 20% of current quarter's amount payable under Agreement.
4.	$95\% \leq \text{Uptime} < 97\%$	A penalty of 30% of current quarter's amount payable under Agreement.
5.	Below 95%	A penalty of 40% of current quarter's amount payable under Agreement. In the event the uptime is equal to or more than 90% but less than 95% for two (2) or more consecutive quarters. Chandigarh Police shall have the right to terminate the Agreement.

d) The uptime/downtime calculations should be provided by the Contractor (Service Provider) to Chandigarh Police within 15 days of the expiry of each quarter. The same will be verified by Chandigarh Police and penalties, as applicable, will be imposed.

e) The Contractor shall have to pay the penalty to the Chandigarh Police within 15 days of its imposition, failing which other remedies including legal actions may be initiated.

f) The Contractor shall also ensure the following:
Uninterrupted operation and the availability of the network shall be 99.99% during the period. The penalty in the event of breach of this clause shall be 10% of current quarter's amount payable under the contract.

3. The Contractor shall further ensure the following:-
 - a. Any Base Station shall not be down by more than 5 minutes at a stretch.
 - b. Not more than 10% of the total radio units should be down at any particular time.
 - c. The faulty radio units should be repaired/replaced within a period of 4 hours (including travel time) during other periods.

In the event of above mentioned failures suitable action may be initiated by Chandigarh Police.

The Contractor shall keep provision of scheduled generation of reports detailing uptime, downtime of RF network as well as for complete network (including all peripheral devices such as but not limited to microwave, optical transmission equipments, power supply etc.) Service degradation instance, Site-wise performance statistics etc. All such reports shall be automatic and shall be date and time stamped.

Contractor shall provide the daily traffic statistics report indicating successful calls, unsuccessful calls (including but not limited to call lost during setup time, dropped calls, calls lost due to congestion in transmission/gateways, missed calls etc.) with details and reasons of failure. Transmission resource loading, Site wise load distribution, identification of peak loading and peak hours both on Site and system level.

8. CONTRACT PERFORMANCE BANK GUARANTEE

- 8.1 M/s _____ shall furnish a Contract Performance Bank Guarantee for Rupees _____ i.e. five percent (5%) of the CAMC Rates from a scheduled Bank.
- 8.2 The contract Performance Bank Guarantee shall be valid for contract period Plus 45 days from the contract date and same will be released/ discharged after the successful completion of the contractual obligation i.e. contract period and returned of all equipments in working condition.
- 8.3 In case CAMC is extended, the Contract Performance Bank Guarantee shall also be extended accordingly.

9. INDEMNITY

'User' shall not be liable for any failure on the part of 'M/s _____' in compliance of application legislations, status, ordinance, regulations and requirement of law.

'M/s _____' agrees to protect, defend, hold the 'User' harmless and indemnified against any legal, quasi-legal or civil implications that may arise out of any dispute, error omission or commission, any lapse or laxity in any company operations, 'User' shall neither be a party nor be a witness, technical or otherwise, in case of any default, fraud, misappropriation, accounting errors or in any other cases relating to company's operation either jointly or separately.

10. PROVISION TO INCLUDE ADDITIONAL EQUIPMENT/FEATURES

- i) If it is required to include any additional equipment, Features and/or services in the contract at any time during its occurrence, either party may request such changes subject to the agreement of the other party.
- ii) If any changes notified under this clause, causes an increase or decrease in the cost, an equitable adjustment shall be made to the CAMC charges and the contract shall be modified in writing accordingly and the same is reflected as an addendum to this contract.

11. NO ASSIGNMENT

M/s _____ has no right to give, bargain, sell, assign or sublet or otherwise dispose of the contract, as well as to give or to let a third party take benefit or advantages of the present contract or any part thereof.

12. CONFIDENTIALITY

Any information accessed classified as confidential provided by disclosing party during the term of the contract shall not be passed on to any third party by the receiving party without the prior written consent of the disclosing party.

The requirement of this article shall continue even after the termination or completion of this contract.

13. **NO WAIVER** :The failure by one party to require performance of any provision shall not affect that party's right to require performance at any time thereafter, nor shall a waiver of any breach or default of this contract constitute a waiver of any subsequent breach or default or a waiver of the provision itself.

14. **TERMINATION FOR DEFAULT**

- i) The user DGP UT Chandigarh reserves the right to terminate the CAMC prematurely on unsatisfactory performance with at least 30 days notice if the maintenance services of M/s_____are not found satisfactory.
- ii) On termination of the contract for default, the security deposit as Bank Guarantee of M/s_____will be forfeited.

15. **RESOLUTION OF DISPUTES**

In the event of any dispute or difference between the parties hereto, such disputes or differences shall be resolved amicably by mutual consultation or through the good offices of empowered agencies of the government. If such resolution is not possible within thirty days of the receipt of notice by the other party of the existence of such dispute, then the unresolved dispute or the difference shall be referred to arbitration of an arbitrator to be nominated by Home Secretary in terms of office memorandum no. 55/3/1/75-CF dated 19th December, 1975 issued by the Cabinet secretariat (department of Cabinet Affairs) , as modified from time to time. The arbitration and conciliation Act 1996 (No. 26 of 1996) shall not be binding upon parties to the disputes, provided , however, any party aggrieved by such award may make further reference for setting aside or revision of award to Law secretary whose decision shall bind the parties finally and conclusively.

16. **GOVERNING LAW**

This contract including the contract document shall be governed by and construed in accordance with laws of India and Chandigarh courts shall have jurisdiction in this regard.

17. **ENTIRE CONTRACT**

This contract including the contract documents constitute the final expression of agreement between the parties and supersedes all previous agreements and understandings, whether written or oral, relating to the contract. This contract may not be altered, amended, or modified except in writing, signed by the duly authorized representatives of both the parties.

IN WITNESS WHEREOF, the parties here to have caused this contract to be executed by their duly authorized representatives as of the last day and year written_____ow:

Signed by_____

Signed by_____

(M/S_____)

(Chandigarh Police)

Witness 1: _____

Witness 2: _____

BIDDER PROFILE**A. General Information:**

- ix. Location of Corporate Headquarters:
- x. Date and Country of incorporation :
- xi. Manufacturing Facility(is)
 - 4. Location
 - 5. Size
 - 6. Capacity
- xii. No. of Service Facility(ies) in India
 - 4. Location
 - 5. Strength
 - 6. Area Covered
- xiii. Average yearly turnover for last three years:
- xiv. Geographical Distribution of the Supplier:
 - 4. No. of offices
 - 5. Locations
 - 6. Staff strength
- xv. Total No. of installation of the system offered.
- xvi. No. of Employees
 - a) Total No.
 - b) Manufacturing
 - c) R&D (if any)
 - d) Hardware Maintenance
 - e) Software

C. Reference of Major Installation with similar products (attach documents in support, if available).

S.No.	Customer Name, Address and Telephone Number	Product Description (Number of machines installation year wise)

C. Whether the firm is cleared in respect of security by the authorised Government agency.

Signature and seal of bidder
Date _____

TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date:

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _

Name of Tender / Work: -

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organization too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract , without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

PROPRIETARY & CONFIDENTIALITY

This tender call is issued by DGP UT, Chandigarh-160009 and no part of this document can be reproduced in any form or by any means, disclosed or distributed to any person without the prior consent of O/o DGP UT Chandigarh except to the extent required for submitting bid and no more.

The guidelines referred are indicative; the Bidder is bound by other appropriate guidelines related to the subject. This Tender is not an agreement and is neither an offer nor invitation by the DGP UT Chandigarh to the prospective Service provider or any other person.

The purpose of this Tender is to provide interested parties with information that may be useful to them in the formulation of their bids pursuant to this Tender. This Tender includes statements, which reflect various assumptions and assessments arrived at by the O/o DGP UT Chandigarh in relation to the supply of Items for O/o DGP UT Chandigarh. Such assumptions, assessments and statements do not purport to contain all the information that each bidder may require.

Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this Tender and to obtain independent advice from appropriate sources.

Signature of the bidder(s)

ELECTRONIC CLEARING SERVICE (CREDIT CLEARING)
(MODEL MANDATE FORM)
(INVESTOR/CUSTOMER'S OPTION TO RECEIVE PAYMENTS THROUGH CREDIT CLEARING MECHANISM)
(Scheme name and the periodicity of payment)

1. INVESTOR/CUSTOMER'S NAME :

2. PARTICULARS OF BANK ACCOUNT

A. BANK NAME :

B. BRANCH NAME :
Address with Tel. No. :

C. 9-DIGIT CODE NUMBER OF THE :
BANK AND BRANCH
(Appearing on the MICR cheque issued
by the bank)

D. ACCOUNT TYPE :
(S.B. Account/Current Account or
Cash credit with code 10/11/13)

E. LEDGER NO./LEDGER FOLIO NO. :

F. ACCOUNT NUMBER :
(As appearing on the cheque Book)

G. IFSC CODE NUMBER/RTGS No. :
(In lieu of the bank certificate to be obtained as under, Please attach a blank cancelled cheque, or photocopy of a cheque or front page of your saving bank passbook issued by your bank for verification of the above particulars.)

3. DATE OF EFFECT

I hereby declare that the particulars given above are correct and complete. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold the User institution responsible. I have read the option invitation letter and agree to discharge responsibility expected of me as a participant under the Scheme.

Date:

Signature of the Investor/Customer

Certified that the particulars furnished above are correct as per our records.

Signature of the Authorized
Official from the Bank

SUGGESTED LOCATION NAME FOR REPEATER SITES		
Bidder has the liberty to install Repeater site on other Civil buildings other than the below mentioned buildings to have the desired level of signal strength as per requirement of Chandigarh Police.		
Sr. No	Site	Sector
1	Police Headquarter	Sector-9
2	Police station – 3	Sector-3
3	Police Post- Lake (Temp. structure)	Sector-6
4	Police station – 11	Sector-11
5	Police post- 24	Sector-24
6	Police Post- PGI (Temp. structure)	Sector-12
7	Police station – 17	Sector-17
8	Home Guard Headquarters	Sector-17
9	Police Post- Neelam (Temp. structure)	Sector-17
10	Police post ISBT 17 (Temp. structure)	Sector-17
11	Police Post – 22 (Temp. structure)	Sector-22
12	Police station – Sarangpur (Temp. structure)	Sector-14 West
13	Police station – 19	Sector-19
14	Police station – 26	Sector-26
15	Police post- Bapudham (Temp. structure)	Sector-26
16	Police station – Ind Area	Ind. Area phase-1
17	Police Post- Daria (Temp. structure)	Ind. Area phase-1
18	Police station – Mani Majra	Sector- 13
19	Police station – IT Park (Temp. structure)	IT Park
20	Police station – Mauli Jagran	Mauli Jagran
21	Police station – 31	Sector-31
22	Police station – 34	Sector-34
23	Police Post- Burail (Temp. structure)	Sector-45

24	Police station – 49	Sector-49
25	Police station – 36	Sector-36
26	Police Post- 61	Sector-61
27	Police Post ISBT-43	Sector-43
28	Police station – 39	Sector-39
29	Police Post- Palsora (Temp. structure)	Sector-55
30	Police station – Maloya	Maloya
31	IRBn Complex	Sarangpur

CORRIGENDUM

Sr.No.	Existing clause	Read as amended	Page No./Sr.No. etc
1.	Two-Cover System	Two-Cover (Bid) System	Page No.17, Sr.16.2
2.	PRICE BID should comprise of the following:- v) As regards price(s) for all items/ services/ equipment's (as mentioned in Price Bid Format) shall be quoted in Indian Rupees only. vi) Bids where prices are quoted in any other way shall be treated as non-responsive and rejected. vii) Price bid should also be uploaded online as per BOQ template. viii) There should be no over writing or cuttings or any interpolations in price(s) while uploading scanned copy online.	PRICE BID should comprise of the following:- i) As regards price(s) for all items/ services/ equipment's (as mentioned in Price Bid Format) shall be quoted in Indian Rupees only. ii) Bids where prices are quoted in any other way shall be treated as non-responsive and rejected. iii) Price bid should also be uploaded online as per BOQ template. iv) There should be no over writing or cuttings or any interpolations in price(s) while uploading scanned copy online. v) The bidder shall quote rates in BOQ consolidated for both i.e. equipment rate + CAMC rates for 07 years after 03 year warranty period. The L-1 will be decided on the basis of total project cost. (Equipment + CAMC)	Page No. 18 sr. 16.5
3.	4. We also hereby extend our full warranty, support as per the conditions of contract, read with modifications, if any, in the special conditions of contract for the goods and services offered for supply by the above firm against this tender enquiry document.	1. We also hereby extend our full warranty, support as per the conditions of <i>contract (Warranty + CAMC period)</i> , read with modifications, if any, in the special conditions of contract for the goods and services offered for supply by the above firm against this tender enquiry document.	Page No,92, Performa point No.3
4.	i) Multi Channel Operation: The system should be equipped to support multi channel operation for meeting current traffic requirements and should be expandable by 100% in future. The bidder should specify the number of sites required and adequate number of channels required at each	i) Multi Channel Operation: The system should be equipped to support multi channel operation for meeting current traffic requirements and should be expandable by 100% in future. The bidder should specify the number of sites required and adequate number of channels required at each site to meet the required grade of service from the proposed system.	Page no. 32 sl. 1.3

	site to meet the required grade of service from the proposed system. ii) The number of frequency spots required for meeting 4000 radios operation as per traffic norms should be projected as per Appendix – 5 from day-one with DQ-4 quality. The number of repeaters should also be factored from day-one. Tentative Procurement Plan of radios: - a) At initial Implementation 2250 nos. Radios (procurement time line of Radios and other components is mentioned in annexure ‘A’.) (b) Radios 1750 nos. to be added over a period of next 5 years iii) The System should provide report of traffic as per Appendix-5 on full load. In case any area is not provided require traffic norms with free from congestion at DQ-4 quality, the bidder shall be responsible to install additional infrastructure in quoted cost by the bidder at no cost to the user.	ii) The number of frequency spots required for meeting 4000 radios operation as per traffic norms should be projected as per Appendix – 5 from day-one with DQ-4 quality. The number of repeaters should also be factored from day-one. Tentative Procurement Plan of radios: - a) At initial Implementation 2250 nos. Radios (procurement time line of Radios and other components is mentioned in annexure ‘A’.) (b) Radios 1750 nos. to be added over a period of next 5 years. The system should be capable of operating 4000 radios from the very commencement of project. iii) The System should provide report of traffic as per Appendix-5 on full load. In case any area is not provided require traffic norms with free from congestion at DQ-4 quality, the bidder shall be responsible to install additional infrastructure in quoted cost by the bidder at no cost to the user.	
5.	System Reliability: Purchaser is very concerned about the reliability of such an expensive system. This Open Standard Digital Trunking Radio (400/800 MHz) System will be used all over Chandigarh. The Bidder must substantiate technically that their proposed system is very reliable or has adequate reliability mechanisms included in its architecture / design portfolio. No degradation in the system trunking features is permissible	System Reliability: Purchaser is very concerned about the reliability of such an expensive system. This Open Standard Digital Trunking Radio (400/800 MHz) System will be used all over Chandigarh. The Bidder must substantiate technically that their proposed system is very reliable or has adequate reliability mechanisms included in its architecture / design portfolio. No degradation in the system trunking features is permissible in case of failure of a controller. All field replaceable units must be hot swappable. One redundant/hot standby site shall be established to ensure system reliability.	Page no. 33 sl. 1.6

	in case of failure of a controller. All field replaceable units must be hot swappable.		
6.	Busy queuing call-back: - The system should provide a call-back feature when any subscriber radio is placed into a system busy queue. - The system will cause the subscriber radio to emit an audible alert, specific for call back, and the subscriber radio should access the assigned channel.	Busy queuing call-back: (Optional feature) - The system should provide a call-back feature when any subscriber radio is placed into a system busy queue. - The system will cause the subscriber radio to emit an audible alert, specific for call back, and the subscriber radio should access the assigned channel.	Pg 35, Sr 2.7
7.	System Fallback Mode: Central control / multisite control system shall have minimum two level of fall back mode.	System Fallback Mode: Central control / multisite control system shall have minimum one level of fall back mode.	Pg 36, Sr 2.14
8.	Introduction : Chandigarh Police intends to install Open standard Digital Trunking Radio System, in 400/800 MHz Frequency Band, fully ready for Wide Area Multiple site Operations for all over Chandigarh coverage. - System infrastructure and control room site equipments should be IP based. - Flexibility: The system must have flexibility for future up gradation as the system is expected to serve the communication requirement of Chandigarh Police for at least next 10 years.	Introduction : Chandigarh Police intends to install ITU/ETSI standard Open standard Digital Trunking Radio System, in 400/800 MHz Frequency Band, fully ready for Wide Area Multiple site Operations for all over Chandigarh coverage. - System infrastructure and control room site equipments should be IP based. - Flexibility: The system must have flexibility for future up gradation as the system is expected to serve the communication requirement of Chandigarh Police for at least next 10 years.	Page no. 32 clause 1.1
9.	Dispatch Center Sites: Dispatch Site at CPCR, Chandigarh Mirror Site	Dispatch Center Sites: Dispatch Site at CPCR, Chandigarh and a Mirror Site in Chandigarh	Page no. 32 clause 1.2
10.	The system will cause the subscriber radio to emit an audible alert, specific for call back, and the subscriber radio should access the assigned channel.	Audible alert on subscriber radio for callback/alert is to be implemented for selective call scenarios only—this understanding is correct and may be clarified accordingly	Section - 2 (Technical Specification)

11.	Cable type: RF Low loss Cable – 100 Mtrs in one length & suitable Connectors both ends at less than 5dB loss or better for 100 Mtrs at 400/800 MHz band and 50 ohm impedance and suitable short cable.	Cable type: RF Low loss Cable – 15 Mtrs in one length & suitable Connectors both ends at less than 5dB loss or better for 100 Mtrs at 400/800 MHz band and 50 ohm impedance and suitable short cable.	Page no. 51 sl. 9.1.5
12.	Network Management System comprising of Network Management Server (NMS) and Network management Terminals (NMT) with two clients	Network Management System comprising of Network Management Server (NMS) and Network management Terminals (NMT) with One client i.e. one NMT with redundant hot standby site.	Page no. 29 Schedule of Requirement Clause 1. b
13.	Night mode for low intensity display/should have backlight or some mechanism for view in dark.	Optional night mode for low intensity display/should have backlight or some mechanism for view in dark.	Page no. 48 Sl. 8.1.e
14.	Message / transmission type of Talk group: It should be possible to select message trunked or transmission trunked via the system manager terminal. The repeater hang time should be programmable.	Message / transmission type of Talk group: It should be possible to select message trunked or transmission trunked via the system manager terminal. The repeater hang time should be programmable. Support for programmable hang time and terminal-to-terminal file/data transfer is standard for systems supporting open standards and is detailed in 2018 DMR and TETRA spec The system manager terminal should allow the selection of either message trunked or transmission trunked modes for talk groups. Terminal-to-Terminal File Transfer refers to the digital transfer of files (such as images, documents, or short data files) directly between two subscriber units within the radio network, subject to supported radio technology.	
15.	Interoperability: The entire system shall be IP based such that future expansion of sites is possible. Other Manufacturer's Radio terminals of Open standard Digital Radio Trunking System should operate on the system with standard trunking features. Bidder shall submit test report/certificate from Association of the proposed technology/ILAC/NABL accredited Government Lab for the proposed subscriber radios and repeater in compliance to	Interoperability: The entire system shall be IP based such that future expansion of sites is possible. Other Manufacturer's Radio terminals of Open standard Digital Radio Trunking System should operate on the system with standard trunking features. Bidder shall submit test report/certificate from Association of the proposed technology/ILAC/NABL accredited Government Lab for the proposed subscriber radios and repeater in compliance to interoperability requirement. The bidder shall demonstrate the interoperability of all mandatory functionalities as mentioned in the respective trunking standard with	Page 33 1.11

	interoperability requirement. The bidder shall demonstrate the interoperability of all mandatory functionalities as mentioned in the respective trunking standard with sample sets of minimum 02 other vendors.	sample sets of minimum 02 other vendors or the IOP certificate is to be provided for Mobile/ Static Radios. The Certificate shall be from National/International recognized laboratory/DMR/APCO association.	
16.	The proposed trunked radio system shall comply with the ITU recommended Digital Radio Trunking Standards, at the time of the proposal submission.	The proposed trunked radio system shall comply with the ITU/ETSI recommended Digital Radio Trunking Standards, at the time of the proposal submission. Both standards are valid if Qualifying Requirements (QR) and Technical Documentation (TD) are met.	Page 34 clause 1.13
17.	The successful bidder shall enclose detailed calculations as part of the Design stage, to establish that there will be no interference/ illegal carrier from other radio communication links operating in this area in the same band of frequencies.	The successful bidder shall enclose detailed calculations as part of the Design stage, to establish that there will be no interference/ illegal carrier from other radio communication links operating in this area in the same band of frequencies. Absolute elimination is not required; demonstration of due technical diligence is sufficient.	Page 34 clause 1.14;c
18.	Max Spurious Output: -20dBm	The specification requires that spurious emissions from transmitters not exceed -20dBm. This is standard for regulatory compliance and aligns with international norms for minimizing out-of-band interference.	Page No. 51 clause 9.1.1 b
19.	Audio Output (Repeater Detect Audio): 600 mV RMS nominal, flat response	Audio Output (Repeater Detect Audio): 600 mV RMS nominal, flat responses are meant to ensure standardized, interoperable signal interfaces. If alternative approaches meet or exceed performance, proposals with technical justification and compliance narrative will be considered.	Page No. 51 clause 9.1.2. e
20.	Establishment of microwave links as per proposed solution for Field trial/survey/technical evaluation between the two repeater sites.	Establishment of microwave links as per proposed solution for Field trial/survey/technical evaluation between the two repeater sites or Demonstration of redundancy/automatic changeover via either microwave link or leased line.	Page No. 14 clause 6.5:d(iii)
21.	System should support Over the air programming (OTAP) or through wire or better and Over the air rekeying (OTAR) for subscriber radios.	OTAP (over-the-air programming) and OTAR (over-the-air rekeying) are desirable, but not mandatory for all standards. Where not technically supported by the offered open-standard technology, these may be offered as optional.	Chapter 2
22.	The antenna systems should be connected via continuous 1x5/8" LDF (or better) cable for Tx/ Rx with proper connectors	The antenna systems should be connected via continuous 1x5/8" LDF (or better) cable for Tx/ Rx with proper connectors and grounding kit to the	Page no. 46 sl. 7.4

	and grounding kit to the combiner / receiver multicoupler. Cable installation should be as per standard telecom procedure with minimum signal loss. All antenna systems should be installed with proper lightening protection. Site must have adequate grounding system; reputed make lightening / surge protection devices should be used in the antenna/ power supply systems.	combiner / receiver multicoupler. SDRs with inbuilt combiner and multicoupler are accepted if unit performance meets specified minimums and interfaces remain standards-compliant. Cable installation should be as per standard telecom procedure with minimum signal loss. All antenna systems should be installed with proper lightening protection. Site must have adequate grounding system; reputed make lightening / surge protection devices should be used in the antenna/ power supply systems.	
23.	The system will cause the subscriber radio to emit an audible alert, specific for call back, and the subscriber radio should access the assigned channel.	For selective calls the system shall cause the subscriber radio to emit an audible alert, specific for call back, and the subscriber radio should access the assigned channel.	Section - 2 (Technical Specification)
24.	License for the equipment (i.e for Digital Trunk Radio System, 400/800 MHz Radio sets and Microwave link).	The vendor should possess valid Dealer Possession License (DPL) for the equipment (i.e for Digital Trunk Radio System, 400/800 MHz Radio sets and Microwave link) during the procurement cycle/process as published through tender by the procuring entity.	Page no. 12 Stage II Technical bid evaluation
25.	PAYMENT SCHEDULE (Part A (90%)) Payment schedule mentioned in the tender required to be amended because Capex and Opex payment should be separated. The Capex Cost of project is higher than the Opex Cost. Therefore 80% payment of the equipment should be released on delivery at your store. It should be read as under: - i) 80% payment on delivery of equipment at stores ii) 20% payment will be made on successful installation / commission / training.	6.2 PAYMENT SCHEDULE Part A (Basic value) iv. 40% payment of stores will be allowed (i) on receipt of the item in good and acceptable condition at consignee's end against Joint Receipt Inspection Certificate and the supplier's challan certified by the consignee and (ii) submission of <u>performance guarantee for 5%</u> of total contract value valid beyond 180 days of warranty and guarantee period and CAMC obligations for 10 years in shape of bank guarantee as per Clause 7 of Chapter-2. v. 40% payment will be made on successful installation/commission & 100 % of services. vi. 20% payment will be made after successful completion of Training requirements and followed by site acceptance by the consignee	<i>Page No. 61 sl. 6.1</i>
26.	PAYMENT SCHEDULE Part B (10%) Part-B (Operational Cost): - The payment of Part B is operational cost for CAMC after warranty period. This clause	Part B (CAMC) iii. Payment will be released as CAMC charges for 4th to 10th years after expiry of warranty period. iv. Rate of CAMC shall be quoted on year to year basis between 1% to	<i>Page No. 61 sl. 6.1</i>

	required to be amended to read as under: CAMC operational cost will be released as CAMC charges for 4th to 10th years in manner as mentioned below: - @10% of B at the end of 1st Quarter of 4th year, @10% of B at the end of 1st Quarter of 5th year, @10% of B at the end of 1st Quarter of 6th year, @15% at the end of 1st Quarter of 7th year, @15% at the end of 1st Quarter of 8th year, @20% at the end of 1st Quarter of 9th year, @20% at the end of 1st Quarter of 10th year.	maximum 5%. The project will be awarded to the firm whose rate are lowest for entire project i.e. basic value + CAMC for 7 years. v. Payment of CAMC shall be made on half yearly basis after the end of each semester after satisfactory operation and maintenance of the complete project.	
27.	Modular Expansion : The system must have the capability of modular expansion in channels by adding extra repeaters only (upto the maximum capacity) at each site.	Modular Expansion : The system must have the capability of modular expansion in channels by adding extra repeaters only (upto the maximum capacity) at each site. System should be capable for expansion from day 1.	Page no. 32, Sl 1.4
28.	Terminal to terminal file transfer operation	Static to static terminal file transfer	Pg 49, Sl 8.1.3
29.	An authorized distributor can submit single bid on behalf of single OEM only.	Multiple distributors can submit bid on behalf of single OEM.	Pg.No.10 Point 6.2 (f)
30.	Encryption: At least AES256 encryption or better protection and "For re-keying" either dynamic keys shall be used or key management system (OTAR) has to be provided	OTAR is optional.	Page no. 36 clause 2.16
31.	AES 256 Bit type-3 certified encryptor module must be built-in into the radios or equivalent, compatible with international standards.	AES-256 encryption module must be built-in into the radios or equivalent, compatible with international standards	Page no. 36 clause 2.17;e
32.	Number of channels: Minimum 100	Number of channels: Minimum 64	Page No. 51 clause 9.1.f

33.	Digital Vehicular Repeater system	Conventional Vehicular Repeater system	Page No. 51 clause 9
34.	In first part Chandigarh Police will depute its twenty (10) engineers / Technicians for training at the works of the manufacturers factory	In first part Chandigarh Police will depute its ten (10) engineers / Technicians for training at the works of the manufacturers factory	Page No. 55 clause 17 (1
35.	Bidder has quoted for goods manufactured by other manufacturer (s) without manufacturer(s) Authorization. Bidders (Principal/Manufacture) cannot submit more than one bid/offer through more than one sole Agent/ distributor.	Bidders (Principal/Manufacture) can submit more than one bid/offer through more than one sole Agent/ distributor.	Eligibility condition point No. 5 V chapter 1
36.	Transmitter Combiner, Receiver Multicoupler	Acceptance of SDRs with inbuilt combiners and multi couplers is permitted if unit performance meets specified minimums and interfaces remain standards-compliant.	Chapter 2
37.	An authorized distributor can submit single bid on behalf of single OEM only.	Multiple bidders can submit bids on behalf of single OEM. • Products from multiple OEMs under a single bid, not allowed.	CHAPTER – 1 IMPORTANT INSTRUCTIONS TO BIDDERS 6.2.f Pre- Qualification Eligibility criteria for Bidders:
38.	j. AES 256 encrypted Dispatch Consoles collocated at Central Police Control Room - 18 k. AES 256 encrypted Dispatch Consoles collocated at hot standby site - 05	a. AES 256 encrypted Dispatch Consoles collocated at Central Police Control Room – 07 b. AES 256 encrypted Dispatch Consoles collocated at hot standby site – 02 c. The system must be scalable to accommodate more dispatch console in the future.	Page no. 29 sl. 1c, 1d
39.	Terminal to terminal file transfer operation @9.2 kbps data rate or better	This is a specific data rate for terminal to terminal file transfer.	Section - 8 (General radio features)
40.	Call history	Call history for hand held radio is an optional feature.	Section - 8 (General radio features)
41.	EMD	MSMEs are exempted from EMD	Chapter-01 Section-03