

Government of India
Ministry of Finance,
Department of Revenue
Central Board of Indirect Taxes & Customs
Directorate of Logistics
4th Floor, 'A' Wing, Lok Nayak Bhawan,
Khan Market, New Delhi 110 511
Phone: 24693529 Fax: 24697497

**E-TENDER ENQUIRY DOCUMENT
FOR SUPPLY, INSTALLATION, COMMISSIONING & MAINTENANCE OF 5
(FIVE) MOBILE X-RAY CONTAINER SCANNING (MXCS) SYSTEMS**

E-Tender No. 08(AS)/2019, dated 27.08.2019

Period during which the tender enquiry documents will be available on official websites www.cbic.gov.in ; www.dolcbec.gov.in & www.eprocure.gov.in	From 27.08.2019 to 14.10.2019
Dead line for seeking clarification	09.09.2019 at 13.00 hrs.
Pre-bid Conference	17.09.2019 at 14.30 hrs. at Directorate of Logistics, CBIC, 4 th Floor, 'A' Wing, Lok Nayak Bhawan, Khan Market, New Delhi – 110 511
Closing date and time for receipt of tenders	14.10.2019 up to 13.00 hrs.
Place of receipt of tenders	Online Submission on https://eprocure.gov.in
Address for submission of Tender fee/ EMD	Directorate of Logistics, 4 th Floor, 'A' Wing, Lok Nayak Bhawan, Khan Market, New Delhi 110 511.
Time and date of opening of tenders	15.00 hrs. on 15.10.2019
Place of opening of tenders	Online opening on https://eprocure.gov.in Directorate of Logistics, 4 th Floor, 'A' Wing, Lok Nayak Bhawan, Khan Market, New Delhi 110511

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**GLOBAL NOTICE INVITING E-TENDER
FOR SUPPLY, INSTALLATION, COMMISSIONING & MAINTENANCE OF 5
(FIVE) MOBILE X-RAY CONTAINER SCANNING (MXCS) SYSTEMS**

Tender No.: 08(AS)/2019 Dated: 27/08/2019

1. For and on behalf of the President of India, Principal Commissioner, Directorate of Logistics, Central Board of Indirect Taxes & Customs (CBIC), Ministry of Finance, Dept. of Revenue, Govt. of India, having its office at 4th floor, 'A' Wing, Lok Nayak Bhawan, Khan Market, New Delhi 110 511 invites Global e-tenders valid up to 270 days from the date of opening of tender, in two parts, namely, (1) Technical Bid and (2) Price Bid, from tenderers who meet the qualification criteria, laid down under clauses 1.4 through 1.10 of Section 1, to design, manufacture, supply, site preparation, installation, testing, commissioning and maintenance for 5 Nos. of Mobile X-ray Container Scanning Systems at (i) Kolkata Port Trust (KoPT) at Haldia, (ii) Chennai Port Trust (ChPT), (iii) Cochin Port Trust (CoPT), (iv) Bharat Mumbai Container Terminal (BMCT), JNPT and (v) Marmagoa Port Trust (MPT), Goa on "turn-key basis".
2. Details of the goods and services required, specifications, eligibility and qualifications to bid and instructions on how to bid and other details are given in the Tender Document, which is available on official website (www.cbic.gov.in ; www.dolcbeec.gov.in) and on www.eprocure.gov.in from 27.08.2019 to 14.10.2019.
3. Interested tenderers may download the tender enquiry documents (TED) and submit their tenders online at Central Public Procurement Portal website: <https://eprocure.gov.in/eprocure/app> .
4. The pre-bid conference(s) will be held on 17.09.2019 at 14.30 hrs.in the Conference Room of Directorate of Logistics at the address mentioned in paragraph 6 below.
5. The tenders can be submitted online up to 13.00 hrs. on 14.10.2019. The tenders will be opened online at 15.00 hrs. on 15.10.2019 at Directorate of Logistics, 4th Floor, 'A' Wing, Lok Nayak Bhawan, Khan Market, New Delhi 110 511.
6. Earnest Money Deposit of Rs 4.12 Crores (Rs. Four Crore Twelve Lakhs only) in the form of Bank Guarantee and a non-refundable tender fee of Rs. 5,000/- (Rs. Five thousand only) or equivalent US dollars in the form of account payee demand draft/bankers cheque drawn on a schedule commercial bank in India in favour of "PAO, O/o the Pr. C.C.A., C.B.E.C." payable at New Delhi, must reach at the address given below by 14.10.2019 at 13.00 hrs. Tenderers, however, have to upload scanned copies of EMD & Tender fee along with the Technical bid of their e-tender.

Deputy Commissioner
Directorate of Logistics,
Customs & Indirect Taxes,
4th Floor, 'A' Wing, Lok Nayak Bhawan,
Khan Market, New Delhi 110511.

7. Bidder must quote site-wise for Mobile X-ray Container Scanners required for all the sites of installation and the bids will be evaluated accordingly.
8. In the event of any of the aforementioned dates being subsequently declared as a holiday/closed day for the purchase organisation, the tenders will be opened on the next working day at the appointed time.
9. The following tenders will be treated as non-responsive and rejected at initial stage itself:
 - (a) Tenders received without tender fee
 - (b) Tenders received without EMD
10. The undersigned reserves the right to withdraw, split, modify and/or cancel the tender without assigning any reasons whatsoever.

-Sd-
Principal Commissioner
For and on behalf of the President of India
Phone: 011-24693529 Fax: 011-24697497

SECTION 1
INSTRUCTIONS TO BIDDERS

INTRODUCTION

1.1 Principal Commissioner, Directorate of Logistics (DoL), Customs and Indirect Taxes, for and on behalf of the President of India invites Global e-tenders from eligible and qualified Tenderers to design, manufacture, supply, install, commission and maintain 5 (Five) Nos. of Mobile X-ray Container Scanning Systems at (i) Kolkata Port Trust (KoPT) at Haldia, (ii) Chennai Port Trust (ChPT), (iii) Cochin Port Trust (CoPT), (iv) Bharat Mumbai Container Terminal (BMCT), JNPT and (v) Marmagoa Port Trust, Goa and to provide related services, including site preparation works, as detailed in Section 3 “Schedule of Requirements” and which meet the “specifications and technical details” as mentioned in Section 4” on “*turn-key basis*”. This Section gives instructions to tenderers regarding preparation and submission of tenders, the mode and procedure to be adopted for receipt and opening, scrutiny and evaluation of tenders and subsequent placement of contract. A contract will be signed with the successful bidder as per the Draft Contract (Section 6) which will be subject to the Conditions of Contract (Section 2). Subject to provisions of paras 1.50 and 1.61 below, the procurement of goods and services under this tender will proceed as follows:

- i. Tender Document will be available on www.eprocure.gov.in and www.cbic.gov.in; www.dolcbec.gov.in from 27.08.2019 to 14.10.2019. Instructions for online bid submission is available on **Appendix-I**.
- ii. Queries regarding tender document and sites of installation should be uploaded latest by 13.00 hrs. on 09.09.2019.
- iii. Pre-bid Conference will be held on 17.09.2019 at 14.30 hrs.
- iv. Tender fee and EMD should be submitted by prospective tenderers on or before 14.10.2019 by 13.00 hrs. (Form 4). [for Joint venture entity, also refer Form 2A1]
- v. Pre-bid pre-contract Integrity Pact should be signed by prospective tenderers with Principal Commissioner, DoL (at least 2 days prior to the last date for submission of tenders) and to be uploaded along with tender and original shall be submitted along with original EMD (Form 12). [for Joint venture entity, also refer Form 2(A1)].
- vi. Tenders along with scanned copy of Tender Fee & EMD should be submitted online along with technical bid on or before 14.10.2019 by 13:00 Hrs.
- vii. Tenders will be opened online on 15.10.2019 at 15.00 hrs.
- viii. Tenders should be valid for acceptance for at least 270 days after final bid submission date.
- ix. EMD in the form of BG should be valid for at least 45 days beyond tender validity date.
- x. After (vii) above, the technical bids will be evaluated by the ‘Tender Evaluation Committee’.
- xi. Bidder shall obtain requisite approvals/ NOC from Atomic Energy Regulatory Board (AERB).
- xii. Price bids of only those tenderers whose technical bids are found acceptable will be opened.
- xiii. Price bids will be evaluated by the ‘Tender Evaluation Committee’ and successful bidder(s) determined.
- xiv. Approval of the Competent Authority will be obtained and a Notification of Award of Contract will be issued.
- xv. EMD of the unsuccessful bidders will be returned.
- xvi. Successful bidder shall submit a Performance Security within 21 days of the Notification of Award. (Form 5). [for Joint venture entity, also refer Form 2(A2)].
- xvii. Successful bidder (Supplier) shall sign the contract within 21 days of Notification of Award.
- xviii. Supplier shall submit a Time Schedule (Bar Chart) within 15 days of Notification of Award.
- xix. Supplier shall prepare and submit Design Basis Report of the Scanner System along with relevant Drawings to the Purchaser before start of manufacture.
- xx. Supplier shall obtain requisite approvals from Atomic Energy Regulatory Board (AERB), as per

- their prescribed procedure, till the handing over of the Scanner Facility.
- xxi. Supplier shall take timely steps to obtain export licence(s) as may be required under the laws of 'country of origin'.
 - xxii. Supplier shall submit Design Basis Report along with relevant Drawings to the Purchaser before commencement of site preparation works.
 - xxiii. Supplier shall obtain requisite approvals/ clearances Port authorities and other statutory bodies (as applicable) as per their procedure.
 - xxiv. Supplier shall submit to the Purchaser the Factory Acceptance Test (FAT) documents within two months and Site Acceptance Test (SAT) documents within four months of the Notification of Award.
 - xxv. FAT will be conducted on the dates to be intimated by the Supplier. The Supplier shall give prior intimation of at least two months to the Purchaser.
 - xxvi. Only on completion of FAT, and after receipt of written communication from Purchaser, the Supplier shall despatch, transport, install and commission the MXCS System as per the contract and intimate to the Purchaser the dates for SAT.
 - xxvii. Supplier shall complete site preparation works and site activities prior to receipt of the MXCS System for installation.
 - xxviii. SAT will be conducted and on its successful completion, the Certificate of Installation will be signed by the Supplier and the Purchaser together with local Customs Commissionerate which concludes the process of installation. (Form 7)
 - xxix. Supplier shall conduct comprehensive training of officers of the local Customs Commissionerate in the operation Scanner System and scanned image analysis.
 - xxx. Local Customs Commissionerate shall conduct tests and trials on the Scanner System for 30 days after installation.
 - xxxi. After successful completion of tests & trials and training, the Supplier shall deliver the MXCS System along with all other relevant materials including manuals, documents, etc. to the local
 - xxxii. Certificate of Delivery and Acceptance will be signed by the Supplier and the local Customs Commissionerate, which completes the Delivery. (Form 8)
 - xxxiii. Supplier shall maintain the MXCS and associated systems for 2 years under warranty and submits Performance Bank Guarantee (Form 5) for the same. [for Joint venture entity, also refer Form 2 (A2)].
 - xxxiv. Supplier shall submit Performance Bank Guarantee (Form 6) for Comprehensive Annual Maintenance Contract (CAMC) and shall sign separate CAMC contract for each site of installation. [for Joint venture entity, also refer Form 2(A2)].
 - xxxv. Performance Security will be returned to the Supplier after completion of all obligations.

1.2 Tenderers should read and understand this entire document, accept all the conditions laid down in it and comply with them. Failure to do so may result in rejection of the tender.

DEFINITIONS AND ABBREVIATIONS

1.3 The following terms and abbreviations used in this document shall have the meanings as indicated below:

DEFINITIONS

- (i) "Bidder" means tenderer who has participated and submitted the valid bid in this tender.
- (ii) "Consignee" means the person to whom the goods should be delivered as per the contract; if the goods are required to be delivered to a person as an interim consignee for the purpose of despatch to another

person as provided in the Contract then that “another” person is the consignee, also known as ultimate consignee.

- (iii) “Contract” means the written agreement entered into between the Purchaser and the Supplier together with all the documents mentioned therein and including all attachments, annexure etc. therein.
- (iv) “Contract price” means price indicated in clause 1.69 through 1.72 of this tender document.
- (v) “Contractor” means person/company/entity engaged by Supplier for carrying out its part work after approval of Purchaser.
- (vi) “Day” means calendar day.
- (vii) “Delivery” means supply of systems or stores in finished and completely ready for use condition. The delivery shall be deemed to take place on delivery of the systems or stores at the places of installation in accordance with the terms of the Contract after taking over the systems and issuance of delivery & acceptance certificate to the Supplier of the same at the sites.
- (viii) “Earnest Money Deposit” (EMD) means monetary guarantee to be furnished by a tenderer only.
- (ix) “E-tender” means tender floated and processed online.
- (x) “Goods” means the goods indicated in the Schedule of Requirements (Section 3).
- (xi) “Inspection” means activities such as measuring, examining, testing, gauging one or more characteristics of the product or service and comparing the same with the specified requirement to determine conformity.
- (xii) “Inspecting Authority” means the authorised representative of the Department to act as Inspecting Authority for the purpose of this contract and for the purpose of ascertaining the progress of the deliveries under the contract.
- (xiii) “Integrity Pact” means the pre-bid pre-contract agreement as per the format in Form 12 which should be signed between the Purchaser and the tenderer as required for tenders of Government of India.
- (xiv) “L1” means the bidder whose tender is the lowest.
- (xv) “Maintenance Contractor” means the contractor entrusted with the responsibility of maintaining the goods in warranty and post warranty period.
- (xvi) “Material” means anything used in the manufacture or fabrication or construction.
- (xvii) “Mobile X-ray Container Scanner” the scanning system mounted on a single-chassis truck as per the specifications mentioned in the tender.
- (xviii) “Original Equipment Manufacturer” means the firm which designs, manufactures and delivers offered X-ray based Container Scanner System.
- (xix) “Performance Security” means monetary guarantee to be furnished by the successful tenderer for due performance of the terms of contract.
- (xx) “Purchaser” means the President of India acting through Principal Commissioner, Directorate of Logistics, Customs & Indirect Taxes, Ministry of Finance, Department of Revenue, 4th Floor, ‘A’ wing, LokNayakBhawan, Khan Market, New Delhi 110 051 and includes his successors in office, nominees, authorized representatives.
- (xxi) “Scanning Facility” means the entire work, including Mobile X-ray Container Scanner and associated systems/ items, within the specified plot.
- (xxii) “Services” means services indicated in the Schedule of Requirements (Section -3)
- (xxiii) “Specification” means the document / standard that prescribes the requirement with which the goods or service have to conform and include;
 - a) Specifications / Requirements
 - b) Drawings / Data and other relevant information for the turn key execution of contract
 - c) Proprietary mark or brand means the mark or brand of a product, which is registered by a Bidder if any.
 - d) Any other details governing the construction, manufacture or supply of goods as may be prescribed in the Contract.

- (xxiv) “Supplier” means the bidder to whom a contract has been awarded for supplying goods and services as per this tender.
- (xxv) “Technical specification” includes Specifications, Drawings, Documents and certificates as referred in Section 4 and any other details governing the construction, manufacture or supply of stores as may be prescribed in the contract.
- (xxvi) “Tender” means the bid received from a tenderer.
- (xxvii) “Tenderer” means an entity participating in the bid.
- (xxviii) “Tender Document” means the instant document.
- (xxix) "Test / Trial" means such tests as are prescribed in specifications to be made by the Purchaser or his nominee, after assembly ex-works before the equipment is installed by the tenderer as well as the tests to be performed before installation and commissioning.
- (xxx) “Turnkey basis” means the scheme of supply in which supplier shall be responsible for design, manufacture, supply, site preparation, installation and commissioning of equipment, tests and trials, training, maintenance and handing over to the Purchaser for operation.
- (xxxi) “User/Local Customs Commissionerate” means the Commissionerate of Customs under whose jurisdiction the Mobile X-ray container scanner will be installed and operated.

ABBREVIATIONS

AERB	Atomic Energy Regulatory Board
BG	Bank Guarantee
BL	Bill of Lading
BMCT	Bharat Mumbai Container Terminal (JNPT)
CAMC	Comprehensive Annual Maintenance Contract
CBIC	Central Board of Indirect Taxes& Customs
CCTV	Closed Circuit Television
CD	Custom Duty
ChPT	Chennai Port Trust
CIF	Cost, Insurance and Freight
CoPT	Cochin Port Trust
CPWD	Central Public Works Department
DD	Demand Draft
DG	Diesel operated electricity generating machine
DGS&D	Directorate General of Supply & Disposal
ED	Excise Duty
EMD	Earnest Money Deposit
FAT	Factory Acceptance Test
FOB	Freight on Board
FOR	Freight on Road
GCC	General Conditions of Contract
GIT	General Instructions to Tenderers
GOI	Government of India
GST	Goods & Service Tax
ISO	International Standard Organization
KoPT	Kolkata Port Trust
LC	Letter of Credit
LD	Liquidated Damages
MPT	Marmagao Port Trust, Goa
MXCS	Mobile X-ray Container Scanner

NIT	Notice Inviting Tenders
OEM	Original Equipment Manufacturer
PH	Public Health
QA/QC	Quality Assurance/ Control
QAP	Quality Assurance Plan
RCC	Reinforced Cement Concrete
RFP	Request for Proposal
SAT	Site Acceptance Test
TED	Tender Enquiry Document
UPS	Uninterrupted Power Supply system

WHO CAN BID

1.4 Only those who fulfil the following eligibility as well as the qualifications can submit tenders.

ELIGIBILITY

1.5 To be eligible, the tenderer should have not been banned or suspended from Government transactions due to any reason including corrupt and fraudulent practices.

QUALIFICATIONS

1.6 The tenderer should be one of the following:

- a) Original Equipment Manufacturer (OEM) or 100% Indian subsidiary of OEM (duly incorporated in India as per Companies Act) of the Scanner Systems being offered;
or
- b) Joint venture entity with and authorised by OEM (Form 2);
or
- c) Other Indian manufacturers of electronics/imaging/security systems who have a long-term agreement (minimum 10 years) with the OEM (terms of technology transfer agreement to be submitted) and authorised by the OEM to submit a tender; (Form 3).

1.7 The tenderer should have a satisfactory establishment directly through its Indian subsidiary or in collaboration with an Indian firm to install, commission, maintain, repair and to provide technical support for Mobile X-ray container scanner during warranty period and on a CAMC after warranty period and provide product support. The Indian firm should have prior experience of installing & maintaining similar electronic, imaging & security systems in India. The terms of service level agreement entered by OEM with the Indian maintenance entity shall be submitted in the technical bid. The decision of the Tender Evaluation Committee as to whether the establishment is satisfactory shall be final.

1.8 The tenderer must have had an average annual turnover of at least Rs. 110 Crore (or its equivalent in foreign currency) during the last three years i.e. 2016-17, 2017-18, & 2018-19 (or 2016, 2017 & 2018) and should have made profit (profit after tax) in the last 3 years.

1.9 The tenderer should have manufactured & supplied and/or installed & commissioned at least 5 (Five) Mobile X-ray Container Scanner Systems abroad in the last three years. The offered model should be under commercial production and should have been deployed in marine cargo container scanning for more than three years with proven experience (fill-in Form 11). The tenderer should also certify that he or his OEM has not been a defaulter in any previous tender or supply in any part of the world and has not been blacklisted in any country.

1.10 Only one bid can be submitted for the scanner manufactured by each OEM- either by the OEM himself or by his Indian subsidiary or joint venture with the OEM or by other manufacturer authorised by the OEM. If more than one bids are received for the scanner manufactured by an OEM, the Purchaser may reject any or all such bids. If a Tenderer submits a bid on behalf of an OEM, the same Tenderer shall not submit a bid on behalf of another OEM. Offer containing multiple authorisations by OEM for the same scope of work to any entity(ies) shall be liable for rejection.

HOW TO BID

PRE-BID CONFERENCE AND CLARIFICATIONS

1.11 A Pre-Bid conference will be held on 17.09.2019 at 14.30 hrs. in the Conference Room of Directorate of Logistics, New Delhi to furnish clarifications regarding the tender document. Prospective tenderers or their authorized representative(s) may attend the Pre-bid conference. The authorized representative(s) who attend the Pre-Bid Conference must bring with them letters of authority from the tenderer/OEM they represent.

1.12 Prospective tenderers should examine the tender document carefully and if they need any clarifications, they may submit them online on www.eprocure.gov.in latest by 09.09.2019 at 13.00 hrs. No queries and requests for clarifications will be entertained after the Pre-Bid Conference.

1.13 Tenderer may visit the sites of installation, at his own expenses, to have first-hand knowledge of the site & its surrounding and availability of resources for site preparation works and installation, commissioning, etc. of MXCS System.

1.14 All clarifications provided in connection with above shall be put on the website www.cbic.gov.in ; www.dolcbec.gov.in or www.eprocure.gov.in

1.15 The tenders shall be submitted **online** on www.eprocure.gov.in in a two cover procedure. The first cover is a technical bid and the second cover will be the financial bid. The tender should be digitally signed. If the tenderer is a company the tender should be digitally signed by the person authorized by a resolution of the Board of Directors of the Company. A scanned copy of the relevant resolution should be attached with the technical bid.

PREPARATION AND SUBMISSION OF TENDERS

1.16 Tender documents may be downloaded from Central Public Procurement Portal (CPPP) website: <https://www.eprocure.gov.in>

1.17 Tenders should be submitted online **only at** CPPP website: <https://www.eprocure.gov.in/eprocure/app>. Hard copies shall not be accepted at this stage. However, hard copies of only technical bids should be submitted while submitting hard copies of bank guarantee for EMD.

1.18 Tenderers should follow the instructions provided in the **“Instructions to the Tenderers/Contractors for the e-submission of the bids online through the Central Public Procurement Portal for procurement at <https://www.eprocure.gov.in/eprocure/app>.**

1.19 The server time (which is displayed on the Tenderers dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the Tenderers, opening of bids etc. The Tenderers should follow this time during bid submission and are advised to do advance planning and take adequate precautions. Any delay in on-line submission of the bid on account of technical fault of e-procurement site/system will not be taken cognizance of, if bid is not submitted within due date and time.

1.20 The Technical Bid should be as per Tender Form (see Form 1) along with all relevant enclosures including the following:

- a) Scanned copy of the DD/ banker's cheque of **Rs. 5,000/-** (Rupees Five Thousand only) submitted in the in the Purchaser's office.
- b) Scanned copy of the Bank Guarantee of Earnest money deposit (EMD) in the format in Form 4.
- c) Scanned copy of signed pre-contract integrity pact (Form – 12) with the Purchaser.
- d) Duly filled and signed Tender Form (Form -1).
- e) Documentary evidence, establishing that the tenderer is eligible to submit the tender and, also, qualified to perform the contract if it's tender is accepted. The documentary evidence needed to establish the tenderers qualifications shall be:
 - (i) In case the tenderer offers to supply goods, which are manufactured by some other firm, the tenderer has been duly authorised by the goods manufacturer/ OEM to quote for and supply the goods to the Purchaser. The tenderer shall submit the manufacturer's authorization letter to this effect as per the standard form provided under Form – 2 in this document.
 - (ii) The tenderer has the required financial, technical, production and maintenance capability necessary to perform the contract and, further, it meets the qualification criteria incorporated in clause 1.4 through 1.10 of Section 1 in this documents.
 - (iii) In case the tenderer is not doing business in India, it is duly represented by an agent stationed in India fully equipped and able to carry out the required contractual functions and duties of the tenderer including after sale service, maintenance & repair etc. of the goods in question, stocking of spare parts and fast moving components and other obligations, if any, specified in the conditions of contract and/or technical specifications.
- f) Documents and relevant details to establish that the goods and the allied services offered conform to the requirement of the tender documents.
- g) Power of Attorney of firm / resolution of Board of Directors of company for person or persons authorized to sign the Tender;
- h) Joint venture agreement as per the instructions contained in Form 2 (A1) & Form 2 (A2).
- i) Power of Attorney / Authorization letter by the OEM to Indian company/ firm to represent the Manufacturer in India; (Form 3)
- j) Copies of documents defining constitution and legal status of the tenderer;
- k) Documents indicating long term arrangements with the OEM (in the event of a collaborator bidding);
- l) Documents indicating the arrangements in regard to maintenance during warranty and post warranty periods; including copies of documents of long-term agreement between the tenderer and the maintenance entity, if any;
- m) Copies of fax messages and letters, if any, sent to and received from the Purchaser during the Tender period;
- n) An undertaking to the effect that the Price bid does not contain any conditions whatsoever;
- o) Last three years certified published annual reports showing the turnover and financial results of the company;
- p) Documents in respect of past supplies made by the tenderer/ OEM;
- q) Documents in respect of maintenance of X-ray based scanner systems in the past in India;
- r) Documents in respect of maintenance arrangement and technical support during warranty/ post-warranty periods.
- s) An undertaking to the effect that OEM and Tenderer has not been a defaulter in any previous tender or supply in any part of the world and has not been blacklisted in any country.

The technical bid should not indicate the bid price directly or indirectly. If it is so indicated, the entire bid will be treated as invalid and shall be rejected.

PRICE BID (Price Schedule)

1.21 The financial bid should be prepared as per the Price Schedule given in Section 5 and uploaded as a .pdf document. It should have no inter-lineation, erasures or alterations and rates and amounts should be written in figures as well as in words, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. Bid with options or conditions shall be liable for rejection.

1.22 For evaluation purpose the uploaded offer documents will be treated as authentic and final. No hard copy shall be submitted for reference purpose. The price bid submitted through e-procurement mode only will be taken up for the purpose for evaluation. Please refer Appendix -I for further details.

1.23 All the documents being submitted by the Tenderers would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done.

1.24 The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

1.25 Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid number and the date & time of submission of the bid with all other relevant details. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid.

1.26 Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for the tender or the relevant contact person indicated in the tender.

INDIAN AGENT

1.27 If a foreign tenderer has engaged an Indian agent in connection with its tender, the foreign tenderer, in addition to indicating in the price schedule the commission payable by him to the agent if any, should also furnish the following information:

- a) The complete name and address of the Indian Agent and its permanent income tax account number as allotted by the Indian Income Tax authority.
- b) The details of the services to be rendered by the agent for the subject requirement.
- c) The Indian agent shall also give details of registration with Govt. e-marketing (GeM), if available.

LANGUAGE OF TENDER

1.28 The tender and all subsequent correspondence shall be in English. If any literature submitted by the tenderer is any other language, an English translation thereof should also be submitted and the English translation shall prevail for interpretation of the tender.

TENDERING EXPENSES

1.29 The tenderer shall bear all expenses incurred in or in relation to preparation, mailing and submission of its tender and its subsequent processing regardless of the conduct or outcome of the tendering process. All expenses for visits to sites by the tenderer and their representatives shall also be borne by them only.

AMENDMENTS TO THE TENDER DOCUMENT

1.30 The Purchaser may, at any time prior to the deadline for submission of tenders, for any reason,

whether at his own initiative or in response to a clarification sought by prospective tenderer, issue addenda or corrigenda modifying this Tender Document. Such addenda or corrigenda shall be uploaded on www.cbic.gov.in, www.dolbec.gov.in and/or www.eprocure.gov.in and the tenderer should check for addenda and corrigenda before submitting his tender. Any other communication issued to the tenderers shall not be construed to amend the Tender Documents. In order to give the prospective tenderers reasonable time to the to prepare their tenders as per the amendment, the Purchaser may, at its discretion extend the deadline for the submission of tenders and other allied time frames, which are linked with that deadline.

EARNEST MONEY DEPOSIT (EMD)

1.31 The tenderer should submit EMD of Rs. 4.12 Crore (Rs. Four crore Twelve lakhs only) in the form of a Bank Guarantee from a scheduled commercial bank operating in India and as per the format in Form 4 and valid up to 45 days beyond the validity period of the tender on or before 14.10.2019 by 13.00 hrs.. However, scanned copy of EMD shall be uploaded along with the technical bid. Tenderers, who are currently registered and also will continue to remain registered during the tender validity period with Govt. e-marketing (GeM) . or with National Small Industries Corporation (NSIC), New Delhi are exempted from payment of cost of tender document and Earnest money. In case the tenderer falls in these categories; they should furnish certified copy of their registration with the above agencies, as the case may be, for the goods as mentioned in the tender.

1.32 If the tenderer withdraws or amends its tender or impairs or derogates or resiles from the tender in any respect within the period of validity of its tender or extension thereto; his EMD will be forfeited. The successful tenderer's earnest money will be appropriated if he does not sign the contract and furnish the performance security within the specified period.

1.33 If the EMD is not forfeited as above, successful tenderer's earnest money will be returned without any interest, after the performance security is received from that tenderer. Unsuccessful tenderer/s' EMD will be returned, without any interest, not later than 45 days after the expiry of the tender validity period.

PRE-CONTRACT INTEGRITY PACT

1.34 The Tenderer shall have to sign a pre-contract integrity agreement with the Purchaser while submitting the bid in the format provide in Form-12.

1.35 In case of the successful Tenderer, a clause would be incorporated in the Article pertaining to Performance Bond in the Purchase Contract that the provisions of Sanctions for Violation, as contained in Form-12, shall be applicable for forfeiture of Performance Bond in case of a decision by the Purchaser to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

1.36 Earnest Money Deposit (in pre-contract stage) and /or Security Deposit/Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the Purchaser and Purchaser shall not be required to assign any reason therefor.

1.37 No interest shall be payable by the Purchaser to the Tenderer on Earnest Money and or/Security Deposit/Performance Bond for the period of its currency.

TENDER VALIDITY

1.38 The tenders should remain valid for acceptance for a period of 270 days (Two hundred Seventy days) after the date of tender opening indicated in the tender document. If the day up to which the tenders are valid falls on/ is subsequently declared a holiday or closed day for the Purchaser, the tender validity shall be

automatically extended up to the next working day.

1.39 Under certain circumstances, the Purchaser may request the tenderer to extend the validity of their tenders upto a specified period. The tenderers, who agree to extend the tender validity, should do so without any change or modification of their original tender and they should also extend the validity period of the EMD correspondingly.

ALTERATION AND WITHDRAWAL OF TENDER

1.40 The tenderer, after submitting its tender, may alter / modify its tender online within the deadline for submission of tenders. Alterations/modifications to tenders are not possible and are not permitted after the prescribed deadline.

1.41 No tender can be withdrawn after the deadline for submission of tender and before expiry of the tender validity period. If a tenderer withdraws the tender during this period, it will result in forfeiture of the earnest money furnished by the tenderer in its tender.

HOW WILL THE TENDERS BE EVALUATED

OPENING OF E-TENDERS

1.42 The Purchasing Organization will open the Technical bids at 15.00 hrs. on 15.10.2019. If this date falls on/ is subsequently declared a holiday or closed day for the Purchaser, the tenders will be opened at the appointed time and place on the next working day.

1.43 Physical presence of the bidder at the time of opening of tender is not required in e-tendering process. At the appointed time, the bid openers would open the bids online and the details of technical bids offered by the bidders would be known to all on the CPP Portal.

1.44 The first cover, i.e. technical bids will be opened first. These bids will be scrutinized and evaluated with reference to parameters prescribed in the tender document. If the details/data given in the technical bids are found in conformity with the technical specifications prescribed in Tender Document, testing of the models offered by the Tenderers may be carried out to ascertain the actual performance of the systems, including visit to the sites where such Mobile X-ray container scanners have been installed by the Tenderer and/or seek technical presentation by the Tenderer or discussions with the authorities where such systems have been supplied, at the discretion of the Tender Evaluation Committee. The tenderer will be responsible to arrange necessary permission from the authorities concerned to enable such visits by the Purchaser and/or his representative(s) to witness the demonstration of the X-ray based Mobile container scanners, in case visits are planned. All cost of demonstration, if undertaken, shall be borne by tenderer.

1.45 The second cover, i.e. price bids of only technically acceptable offers shall be opened and evaluated. All Tenderers whose technical proposals have been found acceptable will be informed about the time and date of opening of the Price Bids.

BASIC PRINCIPLE

1.46 Tenders will be evaluated on the basis of the terms & conditions already incorporated in the tender enquiry document, and amendments, if any, based on which tenders have been received and the terms, conditions etc. mentioned by the tenderers in their tenders. No new conditions will be brought in while scrutinizing and evaluating the tenders.

1.47 The Purchaser reserves the right to have the financial and other data / credentials claimed by the tenderer verified independently, if necessary by a third party. If the data/ credentials furnished are found to be

incorrect, the Purchaser will reject the particular Tender summarily. The Purchaser also reserves the right to reject any Tender submitted by a tenderer if it comes to know *suo-moto* of any adverse reports on the financial condition, technical competence and other matters of the tenderer.

PRELIMINARY SCRUTINY OF TENDERS

1.48 The tenders will first be scrutinized to determine whether they are complete and meet the essential and important requirements, conditions, etc. as prescribed in the tender enquiry document. The tenders, which do not meet the basic requirements, are liable to be treated as unresponsive and ignored.

MINOR INFIRMITY / IRREGULARITY / NON-CONFORMITY

1.49 If during the preliminary examination, the Purchaser finds any minor infirmity and/or irregularity and/or non-conformity in a tender, the Purchaser may waive the same provided it does not constitute any material deviation and has no financial impact and, also, does not prejudice or affect the ranking order of the tenderers. Wherever necessary, the Purchaser will convey its observation on such 'minor' issues to the tenderer either online or by registered/speed post, etc. asking the tenderer to respond by a specified date. If the tenderer does not reply by the specified date or gives evasive reply without clarifying the point at issue in clear terms, that tender will be liable to be ignored.

SCRUTINY AND EVALUATION OF TENDERS TECHNICAL BIDS

1.50 The technical bids will be evaluated by the Tender Evaluation Committee (TEC) to assess the following:

- a) Is the bidder eligible and qualified to submit the tenders?
- b) Does the tender conform to all the Instructions to Tenderers?
- c) Are the goods and services offered as per the Schedule of Requirements and Technical Specifications?
- d) Is the proposed set-up for warranty and post-warranty maintenance satisfactory?
- e) Is the bidder capable of providing the goods and services?

1.51 To assist examination, evaluation and comparison of the bids, the Purchaser may at its discretion, request any Tenderer for a clarification/ additional information on its bid. Any clarification/ additional information submitted by a Tenderer in respect to its bid that is not in response to a specific request by the Purchaser shall not be considered for purpose of evaluation. The Purchaser's request for clarification and the response shall be in writing. No change in the price and substance of the bid shall be sought or offered or permitted.

PRICE BIDS

1.52 In the second stage, Price bids of bidders whose technical proposals are acceptable will be opened, scrutinised and evaluated. Price bids which are not as per the Price Schedule in the Tender Document will be ignored. Other price bids will be evaluated as follows:

- a) Bids of all tenderers will be converted into Indian Rupees for comparison. Any part of the bid not in Indian Rupees will be converted at the exchange rates established by the State Bank of India (BC selling Rate) for similar transactions, as on the date of opening of the Technical Bid. If on this date, due to any reasons such exchange rates are not available (FOREX market being closed), the latest available rates prior to the date of opening shall be considered.
- b) The lowest tenderer (L1) shall be determined on the cost of Mobile X-ray Container Scanner System plus net cash outflow from the Purchaser in the first eight years after completion of warranty period after commissioning on account of CAMC, for individual Port of installation. Future cash flows

towards CAMC, for this purpose, shall be converted into “*net present values*” by using the discounted cash flow procedure @ 8% per annum. The net cash outflow will be as under:

Net cash outflow= (P) + (M) where (P) = Contract Price of MXCS system and (M) = Sum of discounted annual maintenance charges for eight years

For calculation of (M) above, payments on account of CAMC shall be discounted to present values as under:

Sl. No.	Payments	Discounting factor	Net Present value
	A	B	A / B
1.	1 st Year CAMC advance	1.17	
2.	1 st Year CAMC balance	1.26	
3.	2 nd Year CAMC advance	1.26	
4.	2 nd Year CAMC balance	1.36	
5.	3 rd Year CAMC advance	1.36	
6.	3 rd Year CAMC balance	1.47	
7.	4 th Year CAMC advance	1.47	
8.	4 th Year CAMC balance	1.59	
9.	5 th Year CAMC advance	1.59	
10.	5 th Year CAMC balance	1.71	
11.	6 th Year CAMC advance	1.71	
12.	6 th Year CAMC balance	1.85	
13.	7 th Year CAMC advance	1.85	
14.	7 th Year CAMC balance	2.00	
15.	8 th Year CAMC advance	2.00	
16.	8 th Year CAMC balance	2.16	
Sum of total discounted CAMC charges (M)			

1.53 Notwithstanding inclusion of CAMC charges in the evaluation criterion, all duties and taxes forming part of the Proforma in Section 5, shall be taken into account for purpose of evaluation of bids.

1.54 If, in the price structure quoted by a tenderer, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price will be corrected accordingly, unless the Purchaser feels that the tenderer has made a mistake in placing the decimal point in the unit price, in which case the total price as quoted shall prevail over the unit price and the unit price will be corrected accordingly.

1.55 If there is an error in a total price, which has been worked out through addition and/or subtraction of subtotals, the subtotals shall prevail and the total price will be corrected.

1.56 If there is a discrepancy between the amount expressed in words and figures, the amount in words shall prevail.

1.57 If, as per the judgment of the Purchaser, there is any arithmetical discrepancy in a tender, the same will be suitably conveyed to the tenderer by registered / speed post. If the tenderer does not agree to the observation of the Purchaser, the tender is liable to be ignored.

1.58 In case the Purchaser finds the duties and taxes mentioned incorrectly, the Purchaser reserves the right to change it to the values considered appropriate and in that event the price quoted by the tenderer shall be adjusted accordingly. If it is felt that the duties were mentioned incorrectly to gain unfair advantage the tender will be liable for rejection.

1.59 In case significant differences are noted in the price bids for different Port locations, such bids may be liable for rejection.

SELECTION OF SUCCESSFUL BIDDER

1.60 Subject to clause 1.61 below, the lowest evaluated responsive tenderer will be the successful bidder and he will be awarded the contract.

PURCHASER 'S RIGHT TO ACCEPT ANY TENDER AND TO REJECT ANY OR ALL TENDERS

1.61 The Purchaser reserves the right:

- a) to disqualify one or more tenderers on grounds of national security and public interest;
- b) to accept in part or in full any tender or reject any tender without assigning any reason;
- c) to split the tender for the purpose of award of contract; or
- d) to cancel the tendering process and reject all tenders at any time prior to award of contract.

The Purchaser shall not be liable to any affected tenderer or tenderers due to above decisions.

CONTRACT FOR GOODS AND SERVICES

NOTIFICATION OF AWARD

1.62 Before expiry of the tender validity period, the Purchaser will notify the successful tenderer in writing, by registered / speed post or by fax (to be confirmed by registered / speed post) that it's tender for goods & services, has been accepted. EMD of all other bidders would be returned as mentioned in Clause 1.33.

SIGNING OF CONTRACT

1.63 Immediately after notification of award, the Purchaser will mail the draft contract form, to the successful tenderer by registered / speed post and e-mail, which the successful tenderer should sign with Purchaser within 21 days from the notification of award as per mutually agreed date. Until the contract is signed, the notification of award shall constitute the conclusion of the contract. The manufacturer/ supplier/ tenderer shall notify the Government of India for any material change in the status, in particular, where such change would impact on performance of the obligations under the contract.

PERFORMANCE SECURITY

1.64 The successful tenderer must submit performance security within twenty one days from the date of notification of award.

CONTRACT FOR CAMC

1.65 A separate Comprehensive Annual Maintenance Contract for each supply of MXCS shall be signed for post warranty period.

MISCELLANEOUS

CONTACTING THE PURCHASER

1.66 From the time of submission of tender to the time of awarding the contract, if a tenderer needs to

contact the Purchaser for any reason relating to this tender enquiry and / or its tender, it should do so only in writing.

1.67 Information relating to the examination, verification, evaluation and comparison of tenders and recommendations concerning the award of contract shall not be disclosed to bidders or other persons. The tenderer shall not canvass in connection with tenders or attempt to influence the scrutiny, comparison and evaluation of tenders.

NON-RECEIPT OF PERFORMANCE SECURITY AND CONTRACT BY THE PURCHASER

1.68 If the successful tenderer fails to sign the contract or provide performance security within time, his EMD will be forfeited and further actions as deemed necessary by the Purchaser will be taken as deemed necessary by the Purchaser will be taken against him.

CONTRACT PRICE

1.69 The Contract will be placed location-wise and will be executed under the supervision of user Commissionerate. The Contract Price of the scanner shall be the price for delivery at the place of installation, Installation & Commissioning, Transportation & Insurance, Inspection & Survey charges, Test and Trials, Services of manufacturer's for two years warranty period, Customs Duty and Central Excise Duty if & as leviable and all other taxes and duties as applicable. Contract Price shall be firm and fixed price subject to variation in Indian duties and taxes but not subject to any escalation whatsoever.

1.70 The Contract Price shall not be subjected to any adjustment in respect of rise or fall in the cost of labour, materials, currency rate variation, devaluation or any other matter having implication on the cost of the execution of the Contract and adjustments for subsequent legislation, statute, ordinance, decree, law, regulation that may occur in the country in which the MXCS System is being manufactured.

1.71 Further, during the period of delivery systems, in case the supplier delivers the system of identical specification at less price to any other party (price being the sole consideration in the supply), the contract price will be deemed to have been reduced by the difference between the price offered to the Purchaser and the other party. Any difference in the terms of supply shall be duly accounted in the process.

1.72 Annual Maintenance charges for post warranty maintenance shall include the cost of spare parts that will be required to be replaced & consumables, inclusive of taxes and duties. GST on the contract charges shall be mentioned separately, which will be reimbursed as per actual.

DUTIES AND TAXES

1.73 The tenderer shall pay all non-Indian taxes, duties, and levies, lawfully assessed against the Purchaser or the tenderer in pursuance of the contract.

1.74 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 of taxes or duties, will be entertained.

1.75 The tenderer should indicate tentative duties and taxes in the proforma as applicable on the date of opening of technical bids. However, payment of duties and taxes shall be made as per actual and the statutory variations in taxes and duties shall be allowed during the delivery period as agreed in terms of the Contract. The Purchaser shall get the benefit if duties and taxes get reduced and pay extra to the supplier if the same increase. However, any new taxes and duties imposed by the Government of India will be on the Purchaser's account. Likewise, any increase/ decrease in net input tax credit on account of imposition of new taxes and

duties imposed by the Government of India will be on the Purchaser's account.

1.76 The Purchaser is not liable to any claim on account of fresh imposition and / or increase of statutory duties or taxes on the raw materials and / or components used directly in the manufacture of the contracted stores taking place during the pendency of the contract.

1.77 If 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 for the deductions so made will be issued by the Purchaser.

1.78 The Supplier shall intimate to the Purchaser the anticipated delivery date of the Systems at least 30 (Thirty) days in advance.

STAGES AND METHOD OF PAYMENT

1.79 The Purchaser will pay the Supplier the following amounts, if the Supplier completes the work at each stage and produces billing documents.

Sl. No.	Stage	Payment	Billing documents which the Supplier has to submit
1.	Advance (on request from the Supplier)	*Up to 20% of ex-duty/tax cost (as soon as possible after signing the Contract)	1. Claim as per Form 9. 2. Evidence that the Supplier has given the performance security. 3. Supplier's commercial invoice in quadruplicate. 4. Bank Guarantee for 110% of the amount sought as advance.
2.	Upon satisfactory completion of Factory Acceptance Tests & receipt of MXCS at the site of installation	*60% of the ex-duty/tax cost, minus advance paid, if any	1. Claim as per Form 9. 2. Supplier's commercial invoice in quadruplicate. 3. Receipt at Site Certificate issued by the user Commissionerate in Form 7A.
3.	Upon completion of installation & commissioning of MXCS	*20% of the ex- duty/tax cost	1. Claim as per Form 9. 2. Supplier's commercial invoice in quadruplicate. 3. Submission of installation & commissioning Certificate issued by the Purchaser in Form 7.
4.	Upon completion of site trials and handing over of MXCS	*20% of the ex- duty/tax cost	1. Claim as per Form 9. 2. Supplier's commercial invoice in quadruplicate. 3. Certificate of delivery and acceptance of MXCS issued by the Purchaser in Form 8. 4. Bank Guarantee for warranty for warranty performance as per Clause 2.9, Section 2.
5.	Duties, taxes and levies, as applicable	100% on payment, as and when made	1. Claim as per Form 9. 2. Supplier's commercial invoice in quadruplicate. 3. Documents showing evidence of payment of duty/ taxes

*: Part of contract price not in INR will be converted at the exchange rates established by State Bank of India for similar transactions, as on the date of release of payment.

FIRM PRICE / VARIABLE PRICE

1.80 The prices quoted by the tenderer shall remain firm and fixed during the currency of the contract and not subject to variation on any account except the taxes and duties, if any, chargeable on the goods which will be payable on actual basis. The Manufacturer / supplier shall accord 'most favoured client' status to the Purchaser vis-à-vis its other Clients / buyers of its equipment/ machines / goods etc. and shall always give the most competitive price for its machines / equipment supplied to the Purchaser .

QUANTITY VARIATION

1.81 The Purchaser reserves the right to increase or decrease up to 1 (one) No. from the original tendered quantity during the currency of contract at the contracted price with requirements and technical specifications remaining same.

SETTLEMENT OF DISPUTES

1.82 The whole of the work shall be carried out under the direction of the Purchase, whose decision shall be final, conclusive and binding on all parties to the contract, on all questions relating to the specification, instructions, manufacture, supply, delivery, rates, payment etc. in connected with the work. Disputes, if any, between the Purchaser and the Contractor shall be referred the Secretary, Department of Revenue, Ministry of Finance, Government of India, whose decision shall be final and binding.

TITLE AND RISK

1.83 Title to and risk of the systems shall pass on to Purchaser upon delivery and acceptance thereof by the Purchaser after signing of certificate of delivery and acceptance as provided in Form 8.

PUBLICATION OF TENDER RESULT

1.84 The name and address of the successful tenderer receiving the contract will be displayed on the notice board and web site www.eprocure.gov.in

2.1 The contract signed with the Supplier will be subject to the following conditions.

USE OF CONTRACT DOCUMENTS AND INFORMATION

2.2 The Supplier shall not, without the Purchaser's prior written consent, disclose the contract or any provision thereof including any specification, drawing, sample or any information furnished by or on behalf of the Purchaser in connection therewith, to any person other than the person(s) employed by the Supplier in the performance of the contract emanating from this tender enquiry document. Further, any such disclosure to any such employed person shall be made in confidence and only so far as necessary for the purposes of such performance for this contract.

2.3 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information mentioned in para 2.2 above except for the sole purpose of performing this contract.

2.4 Except the contract issued to the Supplier, each and every other document mentioned in para 2.2 above, shall remain the property of the Purchaser and, when advised by the Purchaser, all copies of all such documents shall be returned to the Purchaser on completion of the Supplier's performance and obligations under this contract.

PATENT RIGHTS

2.5 The Supplier shall, at all times, indemnify the Purchaser, free of cost, against all claims which may arise in respect of goods & services to be provided by the Supplier under the contract for infringement of any right protected by patent, registration of designs or trademarks. If any claim of alleged breach of patent registered designs, trademarks, etc., is made against the Purchaser, he shall notify the Supplier about it and the Supplier shall, at his own expenses take care of its settlement without any liability to the Purchaser.

COUNTRY OF ORIGIN

2.6 All goods and services to be supplied and provided for the contract shall have the origin in India or in the countries with which the Government of India has trade relations. The word "origin" incorporated in this clause means the place from where the goods are mined, cultivated, grown, manufactured, produced or processed or from where the services are arranged.

PERFORMANCE SECURITY

2.7 Within twenty-one days of the issue of notification of award by the Purchaser, the Supplier, shall furnish performance security to the Purchaser for an amount equal to ten per cent of the Contract Price, valid up to forty five (45) days after the date of completion of all contractual obligations by the Supplier.

2.8 If the contract is amended, the Supplier shall, within fifteen days of issue of the amendment, furnish the corresponding amendment to the Performance Security (as necessary), valid in all respects in terms of the contract, as amended.

2.9 The Performance security or its amendments shall be denominated in Indian Rupees or in the currency of the contract and shall be in the form of a Bank Guarantee issued by a commercial bank in India, as per Form 5. A Bank Guarantee equal to 10% of the Contract Price shall be furnished, as per Form 5; after commissioning and before release of the final stage payment. This performance-cum-warranty shall remain

valid for a period of 2 years from the date of completion and acceptance of work.

2.10 If the Supplier fails to fulfil its obligations in terms of the contract, the Purchaser shall appropriate the performance securities. Otherwise, the Purchaser will release the performance securities without any interest to the Supplier on completion of the Supplier's all contractual obligations including the warranty obligations.

PACKING AND MARKING

2.11 The packing for the goods to be provided by the supplier should be strong and durable enough to withstand, without limitation, the entire journey during transit including trans-shipment (if any), rough handling, open storage etc. without any damage, deterioration etc. As and if necessary, the size, weights and volumes of the packing cases shall also take into consideration, the remoteness of the final destination of the goods and availability or otherwise of transport and handling facilities at all points during transit upto final destination as per the contract. The negligence on part of supplier due to unprofessional packing, handling in transit & storage shall not lead to supply, construction, installation & commissioning of substandard system/Facility or unwarranted delays in schedule.

INSPECTION AND QUALITY CONTROL

2.12 The Purchaser and/or his representative(s) will, carry out Factory Acceptance Tests (FAT) as per the terms of the contract at the Supplier's premises or the premises of the sub-contractors of the Supplier before despatch of goods to check if the goods and related services conform to and perform as per the specifications and quality control requirements of the contract. Requirements/checks to be carried out during FAT/SAT has been tabulated in Appendix II, titled "Parametric Test and Inspection for Acceptance." The Purchaser and/or his representative(s) in consultation with the supplier may conduct additional tests/checks, if found necessary. The Supplier shall ensure and submit an undertaking that all the requisite facilities for carrying out the FAT are available at the site. Lack of facilities or inability to conduct FAT (as mentioned in this tender document) shall result in disqualification of the tender.

2.13 The Purchaser and/or his representative(s) will, carry out Site Acceptance Tests (SAT) as per the terms of the contract at the site of delivery after the Supplier has installed the goods to check if the goods and related services conform to and perform as per the specifications and quality control requirements of the contract.

2.14 The Supplier shall decide the dates for FAT/SAT so as to enable him to deliver the goods and services within the delivery schedule given in the contract and inform the Purchaser the dates of FAT at least 60 days in advance and the dates of SAT at least 30 days in advance.

2.15 Any costs related to presenting the goods for inspection shall be borne by the Supplier who shall provide all reasonable facilities and assistance, including access to relevant drawings, design details and production data to the Purchaser's inspector(s). If the goods fail to conform to technical requirements of the tender, specifications and standards, the Purchaser's inspector may reject them and the Supplier shall either replace the rejected goods or make all alterations necessary to meet the specifications and standards at his own cost and resubmit the same to the Purchaser's inspector for conducting the inspections and tests again.

2.16 The time required for FAT/ SAT including the time required for any replacement of or alterations to the rejected goods and their subsequent re-testing forms part of the time for delivery as per the contract. Therefore, the dates of delivery shall not be extended regardless of the time taken for FAT/SAT, replacements, alterations, re-tests.

IMPORT, TRANSPORT, INSURANCE, CLEARANCE OF GOODS THROUGH CUSTOMS, ETC.

2.17 The contract is for supply, installation and commissioning and delivery of the goods is completed after installation, tests and trials on turnkey basis. The contract is with Purchaser and hence all commercial documents should be in the name of Purchasers only. The Supplier is fully responsible for and should make his own arrangements for import, transport, transit insurance, clearance of goods through the Customs, etc. If the goods have to be shipped from overseas, such shipment shall be made as per the extant policy of the Govt. of India including shipment made by Indian flag vessel or by vessels belonging to the conference lines in which India is a member country.

ADDITIONAL GOODS/SERVICES

2.18 If the Purchaser seeks any goods and incidental services not covered in the tender, it shall be settled in advance by the Purchaser and Supplier. They shall not exceed the contemporary rates charged by the Supplier to other customers for similar goods and services.

WARRANTY

2.19 The Supplier warrants that the goods supplied under the contract is new, unused in full accordance with the requirements of the enquiry specifications and incorporate all recent improvements in design and materials unless prescribed otherwise by the Purchaser in the contract. The Supplier further warrants that the goods supplied under the contract shall have no defect arising from design, materials or workmanship or from any act or omission of the Supplier that may develop under normal use of the supplied goods under the conditions prevailing in India. The Supplier also warrants that the goods are not subject to any security, interest, lien or any other encumbrance. The Supplier shall provide round the clock services of an English speaking engineer for each System for a period of two years i.e. for warranty period for operation, maintenance, running and troubleshooting, etc. of System. The engineer will also train and advise the Purchaser's personnel (the Purchaser's staff) on working and maintaining the machinery and other equipment installed on the System in a satisfactory condition.

2.20 This warranty shall remain valid for a period of 24 months from the date of the completion of the entire work.

2.21 The Purchaser shall promptly notify the Supplier in writing any claim arising out of this warranty. On receiving such notice, the Supplier shall, within 24 hours repairs or replace the defective goods or parts thereof, free of cost, at the ultimate destination. The Supplier shall take over the replaced parts/goods after providing their replacements and no claim, whatsoever shall lie on the Purchaser for such replaced parts/goods thereafter.

2.22. If any defective goods are repaired, rectified or replaced during the warranty period, the warranty for such goods shall be extended to a further period of twenty four months from the date such repaired, rectified or replaced goods start functioning to the satisfaction of the Purchaser.

2.23 If the Supplier, having been notified, fails to rectify/replace the defect(s) within contracted period the Purchaser may proceed to take such remedial action(s) as deemed fit by the Purchaser, at the risk and expense of the Supplier and without prejudice to other contractual rights and remedies, which the Purchaser may have against the Supplier.

2.24 The Supplier shall obtain similar guarantees from each one of his Contractor/ Sub-contractors. However, the overall responsibility shall lie with the Supplier.

ASSIGNMENT

2.25 The Supplier shall not assign, either in whole or in part, its contractual duties, responsibilities and obligations to perform the contract, except with the Purchaser's prior written permission. Each member/constituent of the supplier shall be jointly and severally liable to and responsible for all obligations towards Purchaser for performance of contract/services including that of its associate/sub-contractors under this contract.

SUB-CONTRACTS

2.26 Contract as whole shall not be sub-contracted. Back-to-back sub-contracting is not permitted.

2.27 The Supplier shall notify the Purchaser in writing of all sub-contracts which he wishes to award under the contract. Such notification, in its original tender or later, shall not relieve the Supplier from any of its liability or obligation under the terms and conditions of the contract.

2.28 Any sub-contract awarded by the Supplier shall comply with therequirement of country of origin in clause 2.6.

MODIFICATION OF CONTRACT

2.29 Within the general scope of the contract, the Purchaser may, by a written order given to the Supplier at any time during the currency of the contract, amend the contract altering or modifying one or more of the following:

- a) Specifications, drawings, design etc. where goods to be supplied under the contract are to be specially manufactured for the Purchaser;
- b) Alteration/ additions in construction, works;
- c) Additions in scope of services to be provided by the Supplier;
- d) Any other area(s) of the contract, as felt necessary by the Purchaser depending on the merits of the case.

2.30 If the modification/alteration increases or decreases the cost of goods and services to be supplied, or the time required by the Supplier to perform any obligation under the contract, an equitable adjustment shall be made in the contract price and/or contract delivery schedule, as the case may be, and the contract amended accordingly. If the Supplier doesn't agree to the adjustment made by the Purchaser, the Supplier shall convey its views to the Purchaser within fifteen days from the date of the Supplier's receipt of the Purchaser's amendment / modification of the contract.

TAXES AND DUTIES

2.31 Supplier shall be entirely responsible for all taxes, duties, fees, levies etc. incurred until delivery of the contracted goods to the Purchaser.

FORCE MAJEURE

2.32 The Supplier shall not be liable for any sanction if there is delay and/or failure in fulfilling his obligations under the contract as a result of an event of Force Majeure. For this purpose, Force Majeure means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not brought about at the instance of the Supplier claiming to be affected by such event or which if anticipated or foreseeable, could not be avoided or provided for and which has caused the non-performance or delay in performance. Such events may include, but are not restricted to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts, and freight embargoes.

2.33 If a Force Majeure situation arises, the Supplier shall notify the Purchaser in writing of such conditions and the cause thereof within twenty one days of occurrence of such event. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

2.34 If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side.

2.35 If due to a Force Majeure event the Purchaser is unable to fulfil its contractual commitment and responsibility, the Purchaser will notify the Supplier accordingly and subsequent actions taken on similar lines described in above paragraphs.

DELAY IN THE SUPPLIER'S PERFORMANCE

2.36 If the Supplier fails to deliver the goods and perform the services under the contract within the delivery schedule, unless such failure is due to a *Force Majeure* event, the Purchaser may do one or more of the following:

- a) Impose liquidated damages,
- b) Appropriate performance security,
- c) Terminate the contract for default.

2.37 If the Supplier encounters conditions which may delay delivery of the goods and performance of services, he shall inform the Purchaser in writing and seek extension of the delivery schedule. The Purchaser may agree and by issue a letter extending the delivery schedule of the contract, without liquidated damages if there is a *Force Majeure* condition, and with liquidated damages otherwise. The extension of delivery schedule shall not increase the price on any ground, including any stipulation in the contract for increase in price on any other ground and, or statutory increase in or fresh imposition of any duty or tax on the goods and services after the original date of the delivery stipulated in the contract. However, the Purchaser shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty, excise duty, sales tax or any other duty or tax or levy or on account of any other grounds, which takes place after the expiry of the original date of delivery stipulated in the contract.

2.38 The Supplier shall not despatch the goods after expiry of the delivery period. If there is delay, the Supplier should obtain an extension of delivery period from the Purchaser before despatch. If the Supplier despatches the goods without obtaining an extension, he would be doing so at its own risk and no claim for payment for such supply and / or any other expense related to such supply shall lie against the Purchaser.

LIQUIDATED DAMAGES

2.39 If the Supplier fails to complete the work or deliver any or all of the goods or fails to perform the services within the delivery schedule, unless such failure is due to a *Force Majeure* event, the Purchaser shall, without prejudice to other rights and remedies available to the Purchaser under the contract, deduct as liquidated damages 0.5% percent of the delivered price of the delayed goods and/or services for each week of delay or part thereof subject to a maximum deduction of 20% percent of contract price. Further, during the above mentioned delayed period of supply and/ or performance, the supplier, notwithstanding any stipulation in the contract for increase in price for any ground, shall not be entitled to any increase in price, tax and cost, whatsoever, which take place during the period of delay. But, nevertheless, the Purchaser shall be entitled to

the benefit any decrease in price, tax and cost on any ground during that period of delay.

METHOD OF ACCEPTANCE OR REJECTION

2.40 Within ten (10) days after completion of the tests and inspection (FAT/SAT) the Purchaser shall notify the Supplier by post/courier or by fax of its acceptance of the tests including Facility, if the Systems satisfy the requirements of this contract and the specifications. However, during the tests and inspection should any deficiencies or defects or non-conformity come to notice in the requirements or systems or machineries and accessories; and/ or any part of system or equipment do not conform to the requirement of this contract and/ or the specifications, the Supplier shall take necessary steps to correct such deficiencies or defects or non-conformity within a reasonable period or period of time mutually agreed to. However, such periods would be subject to liquidated damages as per clause 2.39 above.

2.41 Upon completion of corrections of non-conformity/ defect etc., the Supplier shall promptly conduct such further trials or other tests of the Systems, or on the part of equipment thereof concerned as may be deemed necessary to prove satisfaction of the same with the requirement of the contract and specifications, and the Purchaser shall within ten (10) days after completion of the said further trials or tests, advise the Supplier by post/courier/ fax, of its acceptance or rejection of the tests. In the event of rejection, the Purchaser will state the reason(s) why the test fails to satisfy the requirements of the contract and/ or specifications.

TERMINATION FOR DEFAULT

2.42 Without prejudice to any other contractual rights and remedies available, the Purchaser may, by written notice of default sent to the Supplier, terminate the contract in whole or in part, if the Supplier fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the delivery period specified in the contract, or within any extension thereof granted by the Purchaser.

2.43 If the Purchaser terminates the contract in whole or in part, the Purchaser may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit and the Supplier shall be liable to the Purchaser for the extra expenditure, if any, incurred by the Purchaser for arranging such procurement.

2.44 Unless otherwise instructed by the Purchaser, the Supplier shall continue to perform the contract to the extent not terminated.

TERMINATION FOR INSOLVENCY

2.45 If the Supplier becomes bankrupt or otherwise insolvent, the Purchaser reserves the right to terminate the contract at any time, by serving written notice to the Supplier without any compensation, whatsoever, to the Supplier. Such termination will not prejudice or affect the rights and remedies which have accrued and / or will accrue thereafter to the Purchaser.

TERMINATION FOR CONVENIENCE

2.46 The Purchaser reserves the right to terminate the contract, in whole or in part for its (Purchaser's) convenience, by serving written notice on the Supplier at any time during the currency of the contract. The notice shall specify that the termination is for the convenience of the Purchaser. The notice shall also indicate *inter-alia*, the extent to which the Supplier's performance under the contract is terminated, and the date with effect from which such termination will become effective.

2.47 The goods and services which are complete and ready in terms of the contract for delivery and

performance within thirty days after the Supplier's receipt of the notice of termination shall be accepted by the Purchaser following the contract terms, conditions and prices. For the remaining goods and services, the Purchaser may decide:

- a) To get any portion of the balance completed and delivered at the contract terms, conditions and prices; and / or
- b) To cancel the remaining portion of the goods and services and compensate the Supplier by paying an agreed amount for the cost incurred by the Supplier towards the remaining portion of the goods and services.

GOVERNING LANGUAGE

2.48 The contract shall be written in English language. The Purchaser and Supplier shall exchange all correspondence and other documents pertaining to the contract in English.

NOTICES

2.49 Any notice relating to the contract given by one party to the other, shall be sent in writing or by facsimile or email and confirmed in writing. The procedure will also provide the sender of the notice, the proof of receipt of the notice by the receiver. The addresses of the parties for exchanging such notices will be the addresses as incorporated in the contract.

2.50 The effective date of a notice shall be either the date when delivered to the recipient or the effective date specifically mentioned in the notice, whichever is later.

DISPUTE RESOLUTION

ARBITRATION:

2.51 If any dispute or difference arises between the purchaser and Supplier in connection with the contract, it shall be resolved amicably through mutual consultations failing which it shall be referred to the sole arbitration of an Officer in the Ministry of Law and Justice, Government of India appointed to be the arbitrator by the Secretary, Department of Legal Affairs, Government of India. It 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.

2.52 In the event of the Arbitrator dying, 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, IT shall be lawful for the Secretary, Department of Legal Affairs to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid.

2.53 Upon every and any such reference, the assessment of the costs incidental to the reference and award respectively shall be in the discretion of the arbitrator.

2.54 Subject as aforesaid, the Indian law will be the governing law in the matter of any dispute, and the Arbitration and Conciliation Act, 1996 and the rules made there under and any statutory modification or replacement thereof for the time being in force shall be deemed to apply to the Arbitration proceedings under this para.

2.55 If the value of the claim in a reference exceeds Rs. 1 lakh, the arbitrator shall give reasoned award.

2.56 The venue of arbitration shall be New Delhi or such other place as the Arbitrator may determine.

Enforcement of Award

2.57 Any decision or award resulting from arbitration shall be final and binding upon the Parties. The Parties hereto agree that the arbitral award may be enforced against the Parties to the arbitration proceeding or their assets wherever they may be found and that a judgment upon the arbitral award may be entered in any court having jurisdiction thereof.

Fees and Expenses

2.58 The fees and expenses of the arbitrators and all other expenses of the arbitration shall be initially borne and paid equally by respective Parties subject to determination by the arbitrators. The arbitrators may provide in the arbitral award for the reimbursement to the successful party of its costs and expenses in bringing or defending the arbitration claim, including legal fees and expenses incurred by the Party.

Performance during Arbitration

2.59 Pending the submission of and/or decision on a dispute, difference or claim or until the arbitral award is published; the Parties shall continue to perform all of their obligations under this Agreement without prejudice to a final adjustment in accordance with such award.

APPLICABLE LAW

2.60 This contract shall be governed by the Laws of India for the time being in force. Subject to the clauses on arbitration above, the courts of Delhi shall have exclusive jurisdiction in all matters or disputes arising under or in respect of this Contract.

DEFENCE OF SUITS

2.61 If any action in court is brought against the Purchaser or an officer or agent of the Purchaser for the failure or neglect on the part of the Supplier to perform any acts, matters, covenants or things under the Contract, or for damage or injury caused by the alleged omission or negligence of the part of the Bidder, his agent, representatives or his sub-Bidders, workman, contractors or employees, the Supplier shall in all such cases indemnify and keep the Purchaser and/or his representative, harmless from all losses damages expenses or decrees arising out of such action. All claims regarding indemnity shall survive the termination or expiry of contract.

SCOPE OF WORK

3.1 The Supplier shall supply the following goods and services. The cost of all of the following, except CAMC, is deemed to have included in the cost of the Mobile X-ray Container Scanner (MXCS):

- (i) Supply, deliver, install and commission MXCS System and associated systems/equipment;
- (ii) Carrying out site preparation works and providing site related services;
- (iii) Obtaining regulatory and statutory clearances;
- (iv) Training of staff of user Commissionerate in the operation MXCS and in comprehensive image analysis during warranty and post-warranty period;
- (v) Maintenance of the MXCS System for two years under warranty including supply of spare parts and consumables;
- (vi) Comprehensive Annual Maintenance under a contract (hereinafter referred to as CAMC) including supply of spare parts and consumables for a period of eight years after completion of warranty period of two years;
- (vii) Product Support for fifteen years after two years' warranty period;
- (viii) Provide upgrades from time to time.

SUPPLY, INSTALLATION AND COMMISSIONING

3.2 The MXCS should be supplied, installed and commissioned at (i) Kolkata Port Trust (KoPT) at Haldia, (ii) Chennai Port Trust (ChPT), (iii) Cochin Port Trust (CoPT) and (iv) Bharat Mumbai Container Terminal (BMCT), JNPT and (v) Marmagoa Port Trust, Goa at the locations indicated in Appendixes IV (The location drawings will be provided during pre-bid conference). MXCS System should meet the specifications and technical details indicated in Section 4 and should be designed to provide a minimum through-put of 20 containers (40') per hour (based on one-way straight through operation) from the Scanner Facility. (Through-put should factor in all preparatory activities, scanning and post scanning activities such as check-in, weigh-in, scanning, image analysis and check-out).

3.3 The supply, installation and commissioning are deemed to be completed once the Certificate of Delivery & Acceptance is signed by the Supplier and the Purchaser at the site of Installation.

REGULATORY & OTHER REQUIREMENTS

3.4 The MXCS shall meet the regulatory requirements of Atomic Energy Regulatory Board (AERB) in India and other Government authorities. Further, the tenderer is required to provide no-objection certificate from AERB for the model of MXCS System being offered either along with the bid or prior to completion of technical evaluation of the offers. Upon award of contract, the Supplier shall obtain all requisite clearances in regard to regulatory and other statutory approvals/ clearances and shall also make payment of fee/ processing charges/ deposits, as required in this connection. Wherever, the application for approval has to be obtained by the Purchaser, the Supplier shall prepare all such documents as are necessary to obtain the clearances and shall also make requisite payments, if any.

3.5 All tenderers shall make a full and complete disclosure of the export license requirements, if any, of the country of origin along with the Technical Bid for Purchaser's consideration. Supplier i.e. the successful tenderer shall, after obtaining the Purchaser's consent, take all timely steps in obtaining export licence(s) as per the requirements for individual site of installation of MXCS.

3.6 Supplier, after award of contract, will need to submit Design Basis Report, Design Calculations,

Design drawings, QAP, etc. to the Purchaser, before commencement of works for review/approvals, as necessary.

3.7 The Bidder, in his own interest and own expenses, may visit the sites of installation to get first-hand assessment of the site, its surrounding and availability of resources. Prospective bidders may contact following officers during the site visit for obtaining relevant information relating to site and other associated activities required for installation and commissioning of container scanner system.

Location	Contact address
BMCT - Jawaharlal Nehru Port Trust (JNPT)	
Chennai Port Trust (ChPT)	
Kolkata Port Trust (KoPT) at Haldia	
Cochin Port Trust (CoPT)	
Marmagoa Port Trust, Goa (MPT)	

It is advised that prospective bidders inform the Purchaser of their intention of visiting the sites, so that a common date can be fixed and representative(s)/experts of the Purchaser can be present to provide necessary information.

SITE WORKS & SERVICES

3.7 All site construction works and installation activities undertaken by the Supplier will be supervised by representatives of Purchaser/Local Customs Commissionerate.

3.8 In general, the site works involve construction of RCC column & roof shed, RCC concrete pad, site entry & exit roads, fencing & boundary wall, parking shed, paving, painting/epoxy coating, anti-termite treatment, horticulture & landscaping, etc. Site work will include providing/ establishing electrification, communication, networking, public health services, electrical trenches, fire fighting services, water storage & distribution, security & surveillance, diesel storage, weigh-bridge, etc. Pre-fabricated offices with furniture & fixtures, venetian blinds, air-conditioning, etc. will be provided in the Scanning Facility. Extend services such as electric power, water supply, communication/ networking lines, storm water drains, soak pit and septic tank along with connecting sewer lines, fire water line, etc. up to the nearest identified points (by Port Authority) for connection/integration purposes. This may need existing roads to be crossed requiring road cutting, embedding concrete pipes and repairing the road. These will form part of the site works.

3.9 The Bidder in his bid must bring out the requirements of services such as water, electrical power, communication lines, etc., which will be required for the functioning of the Scanner Facility. These will be brought up to a point nearest to the site of installation by the respective Ports.

- 3.10 Civil & structural construction works should meet the following requirements:
- (a) Foundation of the structures should be decided based on the geotechnical survey to be carried out by the contractor for the sites concerned. Design of the foundation shall be carried out as per respective BIS codes & standards. Concrete pad should be designed after considering the soil conditions and should be as per Indian Road Congress specification IRC 58:2002 (Guidelines for design of plain jointed rigid pavement for highways). Sub-grade soil should be treated suitably to increase the bearing capacity. Expansive soil at top level should be removed up to minimum 300 mm depth. It should be backfilled with compacted murrum before soling.

Consolidation of soil may also be required in certain cases. Approach roads should be as per the specifications of Ministry of Road & Highways.

- (b) Structures should be designed for site specific strata (obtained through geo-technical investigations) and should meet the requirements of seismic design criteria as per the seismic zone in which each site falls and as per the provisions of IS 456-2000 with due consideration to environmental exposure condition.
- (c) Minimum M30 grade concrete shall be used in RCC construction along with suitable reinforcement, which should be provided in accordance with IS 13920-1993. Piles for foundation, when found necessary upon geotechnical studies, shall be designed as per the provisions of ARE 2911. Non-destructive testing of cast piles shall also be carried out as per the provisions of IS 14893-2001.
- (d) Scanner Facility should be located above the highest flood level noted for the site. In any case, it shall not be located lower than 450 mm from the adjacent road level.
- (e) Scanner Facility might have to be constructed in the proximity of the existing installations. Hence, the tenderer must consider, while making the bid, the care and caution to be taken and necessary provisions to be made such that no damage (underground/ over ground) occurs to the existing structures/ installations and services there. These installations shall continue to function normally during the construction of the scanner Facility. Boundary wall, fencing, gates, etc. will be in consonance to the existing design in the respective Ports.
- (f) Metallic components, wherever used within the Facility should be of rust free steel. Hand rails, wherever used, should be of approved design in stainless steel pipes/ plates/sections.
- (g) Electrically operated boom-barriers should be of approved design and materials.
- (h) Provision of one ladies toilet, which could be in combination with gents' toilet. All sanitary fitting & fixtures shall be of heavy duty, ISI marked, reputed make (vitrified tiles-Kajaria/Somany/Hindware/Nitco/Cera/Bajaj etc.)/acid resistant tiles and skid resistant (floor). Water taps should be fitted with sensors for auto-start/stop. Toilets should have wash basins, mirrors, towel rails, liquid soap dispensers etc. and all necessary connections & valves. Provision for drinking water cooler, with water purification system, should also be made.
- (i) Adequate provisions shall be made to detect and mitigate fire of any kind in the Facility. For this purpose, the Supplier may have to construct and install an appropriate firefighting system. Water for fire fighting will have to be drawn from the nearest source in the Port.
- (j) Storage capacity of the fuel to operate the scanner system for minimum three days.

3.11 Electrical & communication works will cover, but not limited to, supply, installation, testing and commissioning of:

- a) 415 V, 3 phase, 4 wire Power Control Centre(s).
- b) Local Push Button Stations as needed for facility operation and its associated systems such as weigh-bridge, boom- barriers, motorised gates, air-conditioning units, pumps, etc.
- c) Supply & installation of communication system, VHF sets (5), including cabling/ wiring networking.
- d) Supply of cables & trays, cabling and terminations at various electrical panels/equipment of the Facility for power supply distribution.
- e) Supply & installation of high static electricity & lightning protection systems.
- f) Concealed lighting distribution boards (LDB), lighting panels/switch boards/ sockets, power receptacles, lighting fixtures and accessories within the Facility plot.
- g) Supply & installation UPS (along with necessary battery banks) of suitable rating to sustain the scanning operation for 30 minutes and its integration to commercial/emergency power supply.
- h) Flood lighting system for optimum illumination that provides, when measured at ground level, least 100 lux within 5 meters of the scanner system and at least 20 lux within the whole security zone during work at night or in poor visibility conditions and should be without direct glare. The sitting and maintenance areas shall have lighting of 250 lux.

- i) Supply & installation of separate grounding arrangement for electrical and electronic systems insulated from each other.
- j) Indication/alarm in the operation station, with associated hardware and cabling, of important parameters of the support/ auxiliary systems.
- k) All fittings, furnishing, fixtures, flooring, etc., shall be of reputed make and shall be installed only after these have been approved by the Local Commissionerate.

3.12 It will be the responsibility of Supplier to offer right type of equipment/ system/ furniture/fixtures/ accessories, etc. to meet the tender requirements. These shall be with BIS specifications of reputed make (to be approved by the Purchaser). Equipment and items available in India should only be used for such purposes. All materials & items used in the construction of Facility should new, of reputed brand/make and of tested quality (supported by test certificates from the manufacturer or Govt. approved laboratory). Detailed bill of quantities (for all items of works & supplies) shall be furnished in the technical bid. Any omission of substantial details in this regard may result in likely rejection of the offer.

3.13 General requirements of Civil and Public Health works would be as per the provisions of latest editions of “Central Public Works Department (of India) Specifications”. Electrical works should be carried out as per the provisions and requirements of Indian Electricity Rules, Indian Electricity Acts, National Building Electrification Code, Bureau of Indian Standards (BIS) or equivalent standards.

3.14 Any modifications necessitated during design & detailing of the Facility to meet functional & operational requirements or due to constructional & site requirements, shall be carried out by the Supplier at no extra cost to the Purchaser. However, in case any new or additional requirements in civil and public health services, electrical and air-conditioning, furniture and fixtures items are prescribed (within or outside the premises of the scanner facility, but as part of fulfillment of the work) during the course of construction, the cost difference for such alterations/changes or cost of new/additional items ordered in writing by the Purchaser, will be derived and paid as per schedule given in Form-13 (Unforeseen Changes/alterations).

3.15 Periodic maintenance of structure, concrete pad, roads, fencing, gates, boundary wall, furniture & fixtures, electrical fittings, air-conditioning units, painting, landscaping, etc., in the Scanner Facility, regular upkeep & repairs of the Facility, etc. during warranty and post- warranty periods will form part of the site services.

SITE RESTRICTIONS

3.16 Supplier and his employees shall not trespass beyond the boundary limits of the site on to any adjoining land and the Supplier shall take necessary action to prevent trespassing and shall follow all security regulations and access control as enforced at site by the Purchaser or Roadway authorities or their representatives in regard to men & material movement.

SITE ORGANISATION

3.17 Sites may be located on the main Roadway, where movement of containers takes place on the regular basis. As such, appropriate standard operating procedure will have to be prepared in consultation with concerned port authorities before commencement of the work. Supplier shall maintain a site organisation of adequate strength in respect of manpower, construction machinery and other implements at all times for smooth execution of the contract. This organisation shall be reinforced from time to time, as required, to make up for slippages from the schedule without any commercial implication to the Buyer or his representative. The site organisation shall be headed by a competent construction engineer having adequate experience in

supervision of construction work and authority to take decisions at site.

SITE SERVICES

3.18 Supplier shall render these services as part of the overall project management service. The services shall broadly include, but not be limited to, the following:

- a) Construction water and construction power and their respective distributions.
- b) Support services for the Supplier's erection staff e.g. construction of site offices, temporary stores, residential accommodation and transport to work site for erection personnel, insurance cover, watch & ward for security and safety of the materials under the Supplier's custody etc. as required.
- c) Maintaining proper documentation of all the site activities undertaken by the Supplier as per the proforma mutually agreed with the Purchaser and/or his representative.
- d) Providing 'Industrial Relations' unit and 'Medical' unit to take care of his erection staff. Purchaser or his representative shall have no obligation in this regard.
- e) Securing necessary permits / clearances from authorities for construction including local bodies, port authorities, and other government authorities.
- f) All these arrangements/requirement can be inspected by Purchaser other regulatory authorities at any time during the course of construction

TRAINING

3.19 After installation and commissioning, the Supplier shall initially train at each site, ten customs officers (to be nominated by the user Customs Commissionerate) in the operation of the MXCS and comprehensive analysis of scanned images. Thereafter, the Supplier shall train Customs officers nominated by the user Customs Commissionerate once every six months during the warranty and CAMC period. The Supplier shall specify the course content and aids. The training should take place in an environment where each participant has access to a workstation of his/her own. The training programme (class room, on-screen simulation and hands-on) shall cover all aspects of operation, image interpretation, administrator, etc. In addition, training should also be imparted on radiation safety, mechanical/ electrical safety and first level trouble shooting. Operator feedback mechanism on the system performance should exist, which will assist in addressing the concerns, if any, of the users and also to upgrade the software as necessary. No additional cost will be paid in regard to the above.

TESTS AND TRIALS

3.20 After installation and commissioning, the Supplier and the user Customs Commissionerate will conduct tests and trials for 30 days. If the delivered system works in accordance with the agreed specifications and without faults or malfunction during this trial period of one month, the equipment will be deemed to have been commissioned. During the trial period, the ownership of the equipment shall continue to be with the Supplier. If not, the faults and malfunctions are to be rectified and a further trial period of one month shall be added to permit an additional attempt to meet contract specification. For this extension of one month, the warranty period would be extended by two months. Only one extension of one month shall be granted. If the functioning of the system is not faultless in this extended period, no further extension shall be granted and the contacts shall be liable for cancellation.

DELIVERY

3.21 After successful completion of tests and trials, the Supplier shall deliver the Mobile X-ray Container Scanner System and all related equipment, operation manuals, construction drawings, quality assurance reports, reference documents, etc. to the user Customs Commissionerate. The delivery will be completed when

the Supplier and the user Customs Commissionerate sign the Certificate of Delivery and Acceptance as provided in Form 8. Decisions of the Purchaser as to compliance or non-compliance with the requirements shall be final and binding upon both parties hereto.

DELIVERY SCHEDULE

3.22 The Supplier shall deliver the Mobile X-ray Container Scanner System along with Site preparation works within 12 (twelve) months from the date of notification of award.

TERMS OF DELIVERY

3.23 Until the delivery is completed, the MXCS and all its associated systems & equipment are the responsibility of the Supplier. Accordingly, its packing, transport, insurance, clearance through Customs, handling, maintenance and upkeep until the delivery shall be to the responsibility of the Supplier and to his account.

3.24 Any loss or damage to the Mobile X-ray Container Scanner System & associated equipment during handling, transportation, etc. until completion of delivery shall be to Supplier's account. The Supplier shall be responsible for preferring of all claims and make good for the damage of loss by way of repairs and/or replacement of the portion of equipment damaged or lost.

PROGRESS AND MONITORING

3.25 Within 15 days of the notification of award of contract, the Supplier should submit a detailed Time Bar Chart/PERT chart covering key phases of design, manufacture, inspection & testing, site works, supply, installation and commissioning of the MXCS and its associated systems & equipment. If the Purchaser so requires, the Supplier shall discuss the Time Bar /PERT Chart with the Purchaser and revise it. Time Bar Chart/PERT Chart will be used to periodically review the progress of the project. The Purchaser through its representatives may convene periodic monitoring meetings with the supplier/sub-contractors and other stakeholders, from time to time, to ensure that the construction and other activities are being carried out as per the specifications given in the contract. All key plans, detailed drawings, materials stipulated in requirements and workmanship entering into the making of the Systems may at all times be subject to inspection and tests by the Purchaser or his representative. The facilities, labour and materials necessary for the safe and convenient conduct of such inspection shall be furnished by the Supplier without extra charge.

GENERAL MAINTENANCE REQUIREMENTS

3.26 The MXCS will be required to operate 24 X 7 and the Supplier shall offer satisfactory service during warranty period of two years and post warranty maintenance under CAMC for eight years the Supplier should either have his own service set- up in India or he should appoint as 'Maintenance Contractor' any indigenous manufacturer / reputed contractor who is capable to maintain the MXCS and its associated systems & equipment. The Supplier must indicate in the offer the name of the maintenance contractor and enclose a copy of the agreement with them. The agreement must be valid for at least ten years. The availability of the scanner system should be better than 95% of the time in a year. 5 % time in a year is allowed for break down maintenance, which includes preventive maintenance. Penal charges @ 50% of the AMC charges per hour for the period (number of hours) for which MXCS remained non-operational beyond free time i.e. 5% of the total time in a year, subject to a maximum of 5% of the AMC charges shall be levied. CAMC shall be entered with the successful bidder bringing out modalities of apportionment of time required for break down as well as preventive maintenance.

3.27 The agreement between the Supplier and the maintenance contractor should clearly specify that the

Supplier will provide all necessary technical support including supply of spares and consumable to the maintenance contractor during the maintenance period; both during warranty and post warranty; so that the latter can effectively maintain the MXCS System.

WARRANTY MAINTENANCE

3.28 During warranty period, the Supplier or, as the case may be, the Maintenance contractor shall set right the MXCS System immediately on receipt of a complaint but in no case later than 24 hours. Preventive Maintenance shall be carried out once in 6 months i.e. 4 times during the warranty period of two years. The Supplier must deploy only qualified and experienced staff in maintenance activities. The spare parts whatever required shall be provided by the supplier free of cost.

POST-WARRANTY MAINTENANCE

3.29 Scope of CAMC shall include: (a) supply of all spare parts and consumables, (b) periodical preventive maintenance visits, (c) unlimited 'on-call' visits to attend to the repairs and breakdowns. During CAMC all parts/components shall be repaired / replaced by the Supplier or, as the case may be, maintenance contractor. No extra payment shall be made for replacement of parts.

3.30 At least one engineer should be present, per shift, during the operation of MXCS. Full particulars of maintenance service centre and qualified engineering staff should be enclosed with the technical bid.

3.31 Maximum time limit for attending to the complaint shall be 24 hours. Sunday and any other Govt. Holidays will not be included in the maximum time limit prescribed therein for attending and making the equipment operational. If the MXCS System remains non-operational continuously beyond this time limit, 1% of the CAMC charges will be deducted for every such day or part thereof.

3.32 The Supplier or, as the case may be, the maintenance contractor shall carry out preventive maintenance visits at least once in 6 months. For every failure to carry out a preventive maintenance, 2.5% of the CAMC charges will be deducted.

3.33 Every year, 50% of CAMC charges would be paid as advance against a Bank guarantee for the same amount in a Proforma given in Form 6 issued from any scheduled Bank for the same amount. The balance amount, after due adjustments as per paras 3.26, 3.31 and 3.32 above, would be paid after satisfactory completion of maintenance for one year and on production of the Verification Report issued by the User Commissionerate. GST, as applicable, will be paid extra on submission of proof of payment.

3.34 The Supplier shall indicate in his offer equipment & system replacement/ up-gradation plan for those having service life less than the stipulated post-warranty period. No equipment / system should be used beyond their designated design life as recommended by the manufacturer during the post-warranty period.

PERFORMANCE SECURITY

3.35 At the time of signing the CAMC, the Supplier shall submit Performance security equivalent to 5% of the value of the contract in the form of Bank Guarantee from any Scheduled Commercial Bank as per Form 6. The Guarantee will remain valid during the currency of the contract.

SPARES AND TOOLS

3.36 The Supplier shall indicate the list of Tools, Toolkits or loose components that are to be given as part

of supply and form accessories for servicing purposes. The spares and additional tools recommended by the manufacturer/contractor for all machinery equipment for smooth running of the MXCS System for a period of 10 years excluding warranty period should be listed. The spare parts shall be based on his previous experience and failures encountered in earlier Installations.

PURCHASER 'S RIGHT TO TERMINATE THE MAINTENANCE CONTRACT

3.37 Purchaser reserves its right to terminate the maintenance contract at any time without assigning any reason. The Supplier will not be entitled to claim any compensation against such termination. However, while terminating the contract, if any payment is due to the Supplier for maintenance services already performed in terms of the contract, the same shall be paid to him as per the contract terms.

SOFTWARE & SOFTWARE UPGRADES

3.38 The Supplier shall agree to provide copies of as-built software in executable code that are installed in the system at all levels. It shall also state the Hardware that needs to be in place for implementation ensuring that the system un-availability is minimal. The Supplier shall also comply and guarantee software upgrades for the service life of the scanner. Commercial image processing software, if used, should be provided with each set of the image inspection unit (work station).

3.39 Taking into account the operational requirements of the Purchaser, there may be a need to customize some portion of the software. Supplier should agree for such customization, which is expected to be limited, at no extra cost.

3.40 Any software upgrades developed by the Supplier during the warranty and the post warranty period should be made available to the Purchaser at no extra cost and should be delivered and installed in a prompt and efficient manner. The Supplier should install and train the operator with software upgrades.

DISASTER MANAGEMENT

3.41 The supplier has to provide detailed disaster management plan to meet any eventuality, which may arise during the operation of MXCS. The disaster management plan should be elaborate, detailing the actions to be undertaken in the case of any emergency and/or disaster and defining the role of every authority and person during such a situation.

DOCUMENTATION

3.42 The Supplier shall document design, manufacture, inspection, testing, site works & services, installation, commissioning, test & trials, operation & maintenance, quality assurance and delivery of Mobile X-ray Container Scanner and its associated systems & equipment. The complete documentation work shall be in English.

3.43 Relevant documents as required by the Purchaser shall be submitted for review/ reference, from time to time, during the execution of the contract. Complete documents, quality assurance records and as-built drawings shall be provided to the Purchaser, both in soft & hard copies, after the completion of the contract.

SECTION 4

SPECIFICATIONS AND ALLIED TECHNICAL DETAILS

INTRODUCTION

4.1 Mobile X-ray Container Scanner System will be used in the detection of: (a) Mis- declaration of description of goods, (b) concealment of contraband goods viz. fire arms, explosives, components used in fabrication of improvised explosive devices, precious metals, etc.(concealed or otherwise), (c) material discrimination/ identification, and (d) narcotic drugs and psychotropic substances (concealed or otherwise).

4.2 Mobile Container Scanner shall be an X-ray based system and shall be self-contained, self-sufficient and mounted on single chassis truck. This will include a linear particle accelerator (LINAC), all necessary image processing tools, stowable L-shape boom with detector array, on-board inspection stations, on-board diesel generator and all the safety provisions. Scanner performance better than the one mentioned hereunder will also be accepted, but without any price preference.

4.3 The Bidder shall describe/illustrate scanner system design philosophy, previous experience in the field, general features of the equipment, its advantages as the truck mounted container inspection system and highlights the basis for the proposed system.

4.4 Detailed explanations of X-ray Scanner techniques that include technical specifications & drawings, photographs & schematics, features, merit & demerits and credibility of the techniques involved. It should be clearly stated how the objectives and specifications put forth by the Purchaser can be fulfilled by the proposed equipment & system.

INFORMATION TO BE PROVIDED BY BIDDER WITH TECHNO-COMMERCIAL BID

4.5 Technical information to be provided by the Supplier shall address requirements specified herein. The offer should be complete stating not only compliance of requirements but also the relevant technical description for each item. Non-compliance will be liable for rejection of the offer. Hence, the Supplier should provide all information, descriptions, design values, qualification information and standards of compliance, acceptance levels, schedules, manufacturing plans, etc. as required while submitting the offer.

4.6 Information requested here would be for Tender Evaluation purpose; will be treated confidential and used only for the purpose requested. The details sought herein may be given in the form of catalogs, diagrams, sketches, drawings, specifications, test results, copy of codes & standards, design notes/ description, etc.

4.7 The offered scanner & its associated systems shall be of proven design, under commercial production and having worked in actual field conditions for more than two years. All products offered must be certified to comply with ISO 9001 standard. The Bidder shall provide the details of the installations, contact persons & addresses where in the tendered scanner systems are in actual use. The Purchaser reserves the right to verify the above the information.

REFERENCE DOCUMENTS

4.8 Documents cited below may be referenced and used wherever applicable. Commercial standards may be used wherever required but at no time safety, quality and performance of the MXCS System shall be compromised.

- a) AERB codes/ standards concerning protection against Radiation.
- b) ANSI 42.46 – 2008 American National Standard for determination of imaging performance of X-ray

& γ - ray systems for cargo & vehicle security scanning.

- c) IEC 62523 – 2010 Radiation Protection Instrumentation – Cargo / Vehicle Radiographic Inspection System.
- d) Standards of American Society of Testing & Materials.
- e) Indian Electricity Rules & Indian Electricity Acts.
- f) Specifications of Bureau of Indian Standards.
- g) Specifications of Ministry of Road & Highways.
- h) Indian Motor Vehicle Act.

4.9 The Bidder shall indicate in his offer the codes & standards proposed to be followed for the materials and in the manufacture, inspection, testing, performance evaluation and installation of the scanner systems including associated systems.

4.10 In the event of a conflict between the text of this document and references cited herein, rigorous of the two shall apply.

MODE OF OPERATION

4.11 The containers mounted on truck-trailers (4 to 6 numbers) will be lined-up at the designated location within the operational area. The drivers of the truck-trailers will disembark and will be escorted to a waiting area outside exclusion zone. No personnel shall then be allowed to remain within exclusion zone. After necessary confirmation/ acknowledgement procedures and system checks, the MXCS will scan the containers in a safe and controlled environment.

4.12 After due process of confirmation/ acknowledgement, the drives will be escorted back to their trucks to drive these out of operational area. Next set of truck-trailers will be lined-up for scanning.

ENVIRONMENTAL CONDITIONS

4.13 The System should operate throughout its normal life span, without degradation in performance parameters, under the following environmental conditions:

- a) temperature: 0° to +50°C;
- b) humidity: 0 to 100%;
- c) saline environment of seaport;
- d) driving rain: 50-100 mm per hour, with wind speed up to 100 kmph;
- e) chemical corrosion: airborne pollution due to the presence of various chemicals handled at the Ports, galvanic reaction;
- f) solar radiation: outdoor installation in direct sunlight over ambient;

4.14 All the components of the Systems shall be fully tropicalized. Materials which promote mould growth shall not be used.

4.15 Scanner components shall be compatible for storage between (-) 10⁰ C to (+) 50⁰ C, when scanner is in idle condition. The Supplier shall indicate the steps to be taken to preserve the scanner and its associated systems, if not in use for extended period of time.

CLIMATE CONTROL

4.16 Provisions in regard to climate control shall be elaborated in the offer. The System shall have an automatic climate control system installed that maintains the temperature in the span of (+) 18°C to (+) 26°C

regardless of outdoor temperature, both in the driver's and the image interpreters' cabins. Suitable device to measure and regulate the temperature shall also be provided.

4.17 Adequate climate control system, with back up, shall be provided to keep the critical equipment (such as the linear particle accelerator, control system, etc.) in stable operation under above mentioned ambient condition.

4.18 The air-conditioned control compartment shall have sufficient ventilation for accommodating four (4) passengers (two sitting on the operating seats and others standing behind them), and associated control equipment. The compartment shall be sound treated with proper ventilation. Only non-CFC refrigerant shall be used for climate control / air-conditioning. Piping and ductwork shall be properly insulated by flexible closed cell elastomeric material.

4.19 A D.C. 12V Carbon Monoxide (CO) detector with warning alarm should be available in the System with both visual and audio alarms, which shall be activated in case CO content exceeds a concentration-time function that mimics the uptake of CO in the body while preventing false alarms due to relatively common sources of CO. The CO should comply with BIS standards or equivalent and have a self-test function to ensure that the detector is under normal operation

SYSTEM DESIGN

4.20 The System should have been designed and manufactured as per the stipulations of international standards for cargo container/vehicle scanner equipment. It shall have requisite certification as an approved design and product concerning ionizing radiation in the country of manufacture as well should also meet in this regard the requirements of Indian Atomic Energy Regulatory Board. The Supplier shall provide confirmation and details for the above.

4.21 The imaging system shall be of transmission X-ray type. An imaging system using radioactive source or any other source is not acceptable.

4.22 The System shall be designed and constructed for continuous and reliable operation. The Bidder shall guarantee that the System is serviceable for its lifetime up to a minimum of fifteen years.

4.23 The supplied System shall be new, not a used or a demonstration unit, and come from the manufacturer's standard product line. Bidder shall specify the location of manufacturing/ final assembly plant and country of shipment of the offered scanner System. The Purchaser reserves the right to verify the above.

4.24 It should be a relocate System and hence to be in modular design/ construction. It should be possible to disassemble and transport the relocatable scanner to different locations and reassemble it there with all its pertinent systems, components and accessories within a reasonable time period. The Bidder shall indicate the time that would be required to dismantle the System, weight of the heaviest component for transporting away from the site and time required to reassemble the System.

4.25 All system equipment shall be compact and robust; designed to be stress resistant to withstand vibrations and shocks during travelling and continuous operation of the System. The System shall be capable of withstanding any jerk & jolt during repair work.

4.26 The System design shall allow uninterrupted scanning of containers in all weather conditions on

24x7x365 days (maintenance period excluded). It shall have capability to operate in night-time also and sufficient lighting & other arrangements have to be provided for such operation. Availability of entire System must be better than 95% in a year.

4.27 The System should be self-shielded, and not requiring any additional shielding wall(s), with respect to protection against radiation from the Scanner (including scatter and sky shine). Bidder to provide the overall dimensions of the System and of exclusion zone.

4.28 All units, sub-assemblies, components and adjustable controls of each System shall be readily accessible to the personnel for maintenance purposes. To aid maintenance, all units, sub-assemblies and components of the same type in each System should be mechanically and electrically interchangeable. Adequate test points and other test facilities shall be provided to permit ease of maintenance.

4.29 The System shall be capable of carrying out the scanning process, in full compliance with the specifications at a minimum throughput of 20 vehicles per hour from the scanner facility at normal scan speed (This should include data entry, weigh-in, scan time, image analysis and check out). Bidder to state the average number of containers the scanner is able to scan during six (6) hours of continuous operation in the fixed object inspection mode.

4.30 The maximum set-up time shall be 30 minutes or less from stand still via deployment of boom, adjustment of settings, etc. to beginning (with all system performance parameters in compliance with the specifications) of first scan. The maximum time from termination of operations to a road worthy configuration shall be 30 minutes or less.

4.31 The System shall be capable of operating and giving requisite performance in normal road conditions. Bidder to specify the requirement for road/ platform (type, grade, level, slope, compressive strength, roughness and such other parameters).

4.32 The System shall be self-powered without depending on power from site. However, provision to use standard shore power shall be incorporated for maintenance/ servicing. There should be a manual back-up system for stowing the boom in case of a total power failure. Requirement of shore power shall be indicated in the Bid.

4.33 Adequate number of angle adjustable flood lights powered by the generator should be installed at the high level of the rear body and / or driver cab to illuminate 2m distance around each System at 150 lux (minimum) during operation.

4.34 System should be designed and constructed with adequate redundancy provisions to avoid potential single point of failure from end-to-end process, resulting in non-availability of the system. The redundant provisions should be in hot stand-by mode. Scanner and its associated systems should have built-in self-test and fault-diagnostic capability/feature. Details of redundancy and self-diagnostic provisions shall be submitted.

4.35 The System must be equipped to stop the operation by automatic shutdown device(s) in the case of emergency of any kind. These shall be installed both inside and outside of the vehicle. Towards this, a number of manual reset pushbutton type Emergency Stop buttons (IP65 rating) which can immediately stop the X-ray generation shall be installed at the locations easily accessible by the operation crew. Additionally, wireless

emergency stops and maintenance purpose emergency stops should be provided. Details of emergency stop provisions shall be submitted.

4.36 A weatherproof (IP65) power inlet socket shall be provided to allow the external mains supply. A flexible cable with length of at least 50 m, together with associated safety mechanism, shall be provided for connection of the System with the external AC mains supply. The plug of the flexible cable to the external AC mains supply shall be weather-proof and match the existing electricity installations at the site. Change over switch of adequate load capacity, to avoid overloading, should be provided. Residual current devices should be installed together with the changeover switch for leakage protection. Suitably sized earthing terminal and cable should be provided. All the electrical works shall be carried out as per the provisions and requirements of Indian Electricity Rules, Indian Electricity Acts, National Building Electrification Code, Bureau of Indian Standards (BIS) or equivalent standards. Details of electrical systems shall be submitted.

4.37 The System shall have provisions in terms of all controls for bi-directional (i.e. forward & reverse scanning). Both forward scanning and backward scanning shall be identical in terms of image quality at each of the available scan speeds.

4.38 The System shall deploy a programmable, pre-set speed controls (user-selected speed) to maintain constant speed and synchronise it with the X-ray system during scanning of the containers to generate undistorted scanned images. After completion of operation, a visual alarm shall be triggered inside the driver cab to alert the driver of completion of scanning. Pre-set speed controls shall be activated only for scanning operation and not during normal travelling. At normal road gradient, the linearity of the drive shall be such that there shall not be more than 5% linearity error in the image display. Bidder to provide complete details of speed controller, different scan speeds for inspection, requirement of road gradient, etc.

4.39 Provisions of safety measures such as audio alarms, visual alarms, flashing of lights, indication of an emergency situation, noticeable warning signal while “scanning on”, etc. must be made. The status of safety system shall be displayed on a control panel.

4.40 The System shall consist of a self-sustained truck and shall incorporate, but not limited to, the following:

- a) Chassis;
- b) Diesel Generator Set;
- c) Chassis Mounted Auxiliary Systems & Equipment;
- d) Air Conditioning for Control & Equipment Compartments;
- e) X-ray & Detector System;
- f) Safety related Equipment & Provisions;
- g) Image Processing Software & Hardware;
- h) Integration & Interfacing System
- i) Operators’ & Image Analysis Workstations,
- j) Radiation Monitoring Instruments, CCTVs;
- k) Auxiliary Equipment as specified in these Specifications.

SCANNER PERFORMANCE

4.41 Object to be scanned are standard ISO containers (20 ft. or 40 ft.) used in international trade loaded on to truck-trailers (approx. size of the conveyance: 3.00 m Width, 4.60 m Height, 17.00 m Length). The scan shall cover the object from a height of 0.3 - 0.4 meters above the ground to the top of the container without

missing any area or corner cut-off. The System should meet following performance parameters:

- a) X-ray source: to be indicated by the Bidder (to meet performance requirements mentioned below).
 - b) Scanning speed: Normal scan speed should be 0.4meter/ sec. (Bidder to specify the optimum scan speed to provide clearly defined scanned image that can be interpreted and analysed).
 - c) Penetration: Minimum 300mm of steel. (The offer should also indicate the value of equivalent water penetration in mm for the equipment offered).
 - d) Wire detectability: 2-2.5 mm or better (in free air). (Details of test device and test procedure to be furnished in the bid).
 - e) Contrast sensitivity: 1-2% or better (Details of test device and test procedure to be furnished in the bid).
 - f) Spatial resolution: 5- 6 mm or better (Details of test device and test procedure to be furnished in the bid).
 - g) Material discrimination: Capability to distinguish (based on colour coding) between low-Z organic, low-Z inorganic, high-Z inorganic, very high-Z inorganic, and intermediate materials. System should be capable of estimating the atomic number of the material interactively at image analysis station. (Bidder to provide the technical details as to how material discrimination will be achieved and also details of test device and test procedure in the bid).
 - h) Threat detection: Image processing should be capable of assisting the operator in threat detection and identification. (Details to be provided in the bid).
 - i) Density threshold alert: It should be possible to alert the operator of presence of non-penetrating materials based on programmable density threshold. System should also be capable of generating alert regarding presence of different high density materials within the same cargo (Details to be provided in the bid).
 - j) Release/Hold decision: Should have the capability to tag an image as 'suspect' or 'non-suspect' and store the decision with the image data set.
 - k) Image quality & storage: Should have high performance imaging capability. In addition to achieving the required penetration, contrast sensitivity and spatial resolution, images are to appear clear & focused and with sharp edges & correct aspect ratio. System must store raw images together with the processed final image for each scan.
- (i) The Supplier shall describe under what test conditions the above performance can be achieved.
- (ii) The Supplier should endeavour to provide scanner performance within mean value of above specified parameters for wire detectability, contrast sensitivity and spatial resolution.

IMAGE QUALITY DATA

4.42 The Bidder shall in his bid, submit the images (both in soft copy & print outs) to assess its quality and as would be viewed by the operator /image interpreter for different test object conditions:

- a) Due to variations in X-ray emission characteristics, if so, over the life of Target/RF source for identical objects / test devices.
- b) For varying steel plate thickness of 280 mm to 310 mm and behind 25 mm lead brick of size 100*100mm in steps of 10 mm located at the floor, centre and top of container levels.
- c) Wire detect ability in free air, preferably for 4, 6, 8,10,12,14 & 16 AWGs both in horizontal and vertical planes. The wire material shall be of copper and of length 300 mm. The wires can be in the in the form of rings of 100mm diameter or sine wave shape and located in the middle level of container.
- d) Image contrast for: (a) steel plates of thickness varying from 2 mm, 3 mm, 4 mm, 5mm & 6 mm behind 100 mm, 200 mm & 300 mm thick steel plates; (b) steel wires of length 250 mm, dia varying from 2 mm, 3 mm, 4 mm, 5mm & 6 mm behind 100 mm, 200 mm & 300 mm thick steel plates.

- e) Spatial resolution with slotted jig in different spacing (4mm to 8 mm) with metal and plastic materials.
- f) Material distinguishing capability for: low-Z organic, low-Z inorganic, high-Z inorganic, very high-Z inorganic, and intermediate materials in different colours, using various materials of varying thicknesses. (Test jig with atleast three different materials representing the above and in varying thicknesses should be used and conformance achieved should be more than 95%).

All the above information shall be at the offered scanning speed and shall be submitted in both as soft copy and printouts with Techno-commercial bid.

4.43 The jigs/ devices/ instruments for performing above tests shall be described and also its compliance to International standards & practices. One set of such test jigs/ devices shall be given to each site of System installation. All measuring and test instruments/jigs shall have their calibration certificates conforming to national/ international standards. It should also be possible to re-calibrate these at the site of installation.

ENERGY SOURCE

4.44 It shall be X-ray based linear particle accelerator (LINAC) manufactured by a worldwide leading producer of linear accelerators with proven experience of more than 7 years. Specifications and technical details of X-ray system shall be submitted.

4.45 The X-ray system equipment should include the components mentioned under this section including but not limited to X-ray generator(s), detectors, X-ray detector boom(s), scan drive(s) and other equipment/ components/accessories required to produce the X-ray images specified.

4.46 Focal spot should be as small as possible. Collimator must be installed for directing X-ray into a fan shaped beam to reduce radiation scatter and consequently reduce the size of the radiation exclusion zone. An automatic shut-off control system on the X-ray generator shall be provided to prevent the accidental release of radiation. Pulse-to-pulse dose variation should not perceptible in the final image.

4.47 Additional components such as temperature control unit, modulator, etc. to enable continuous use of the system at a very high capacity and with minimal wear and tear, should be provided. The System shall allow provision of high quality real-time simultaneous acquisition of transmission X-ray images of penetration capability as mentioned above while meeting other performance requirements.

DETECTION SYSTEM

4.48 Detectors, placed in L-frame configuration, should be in adequate numbers to completely cover the whole height of the container to be scanned to provide a high-resolution image without loss of information and any distortion.

4.49 The detector array shall be designed to minimize the source to detector distance. The response of each detector shall be linear and have an output of at least 20 bits. The resulting X-ray image shall be displayed as at least a 16-bit image.

4.50 Detector's size facing the X-ray beam shall as small as possible to provide better resolution. Mounting architecture of the detector modules, maintenance required and replacement method in the case of service should be specified. Detector type, size and detector parameters affecting their performance should be specified.

4.51 The structural members of the detector boom and arm shall be made of rigid and durable materials. Both boom and arm shall be electric/hydraulic powered for locking at a predefined deployed position (for scanning operation) or stowed position (for travelling).

4.52 All electronic devices and components inside the detector boom shall be adequately protected and the protection shall meet at least IP55 or equivalent. There shall be no water accumulation inside the detector boom during the System operation in rainy condition.

4.53 Optical/electronic safety height limiting sensors shall be installed at the front and the rear of the System. The height of the detection sensors shall be adjustable and pre-set for detection of over-height object. If an over-height object is detected, the X-ray generation and the scan drive shall be deactivated, which shall be then followed by triggering of audio and visual alarms to both the console operator inside the control compartment and officers outside the control compartment.

4.54 A warning system linked with the electric / hydraulic power drive shall be provided. Visual and audio warning signals shall be emitted to alert people in the vicinity of the System during the deployment or stowage of detector boom and arm.

4.55 Safety features of the electric/hydraulic power system shall be provided to ensure that the detector boom and arm shall never drop either gradually or suddenly under any possible scenario, including mal-function of any part of the power drive system and/or electric system power failure.

4.56 Safety device shall be installed on the arm so that when there is any obstruction to the arm the safety device shall immediately stop the Vehicle as well as the scanning operation. Override feature with step-by-step procedures shall be provided for the operator to stow the boom and arm to their original positions during system failure, such as power failure and hydraulic failure.

4.57 The detector boom shall be deployed at 90° to the scanned object. However, provision should also exist to adjust the boom angle so as to obtain clear and sharp images of the container, if necessitated.

4.58 The detector boom deploy and stow operations shall be controlled using a handheld pendant connected to the body of the System, so that the crew member can monitor the area and ensure safe deployment.

VEHICLE REQUIREMENTS & PERFORMANCE

4.59 Manoeuvrability: It should be possible to drive the scanner vehicle in Indian public roads without limitations considering height, length, width, weight and those concerning radiation without the need for any special permits. Vehicles should meet Indian Motor Vehicle Regulations & Requirements; the information needed on physical dimensions of the vehicle, including all equipment in “stowed for travel” on public roadways, are: Actual weight in Kg, Height, Length & Width in meter/cm as on road, Load on each Axle in Kg (when fully loaded), Turning radius, Power to weight ratio and Top speed. These shall be furnished in the bid.

4.60 Vehicle Requirements:

- a) Vehicle shall be right hand drive with power assisted steering. It should be designed for safe transportation of at least four (04) persons. Functional description of vehicle operation for scanning shall be submitted.
- b) Dimensions of the vehicle including all equipment & systems should be convenient and cause

minimum of disturbance and trouble in the daily use. The equipment may preferably be mounted on a truck chassis that is commonly manufactured by Indian Industry. Bidder may provide the details as part of the bid.

- c) The operation compartment should be constructed by insulated structural panels in grading suitable for vehicle application and these shall meet relevant fire safety requirements. Noise level of the control compartment shall be lower than 75 dB under all situations of operation.
- d) All doors, windows and panel joints should be closely fitted and adequately sealed or provided with best quality rubber sealing strips to prevent the ingress of rain and shall be able to pass a continuous water leaking test for at least 30 minutes. Adequate drain channels shall be provided to prevent water ingress at all doors, compartments and sliding windows.
- e) Diesel engine shall comply with the latest statutory emission requirements of the Indian Motor Vehicle Regulations and should be supplied with fully tropicalised cooling system. Multi-speed automatic transmission system shall be provided. DG set shall be suitable for cold starting and shall be capable of accepting the load immediately after attaining normal voltage and frequency. Over voltage protection / cut-off feature or device with warning alarm shall be provided. Detailed specifications of on board DG set shall be provided.
- f) Exhaust pipe should be extended and routed to the top and behind the cabin with rain cap to prevent rainwater ingress and thermal guard or at off side low level with flexible coupler behind the wheel. Exhaust emissions must conform to minimum Euro 6(April 2020 onwards it shall be Euro 6), or better exhaust emission standard for India.
- g) Power assisted dual or split circuit braking system equipped with independent mechanical parking brake shall be supplied. Brake air pressure gauge with low pressure warning buzzer shall be provided for each air reservoir. Braking system shall be with an anti-lock and brake retarder provision. Details of braking system shall be provided.
- h) Multi-speed windscreen wipers shall be provided with intermittent speed-control mode and screen washers. Two exterior convex mirrors shall be provided on both sides of the cab for a clear view on the road traffic condition at rear. A mirror should be provided at the nearside front of the vehicle to give a clear nearside kerb and front views for the driver.
- i) Wheelbase shall be able to suit the dimensions of the rear body and maintain a stable condition during scanning operation. Self-levelling system shall be provided to keep the vehicle at a horizontal position when the vehicle is moving on the road as well as during X-ray scanning operation.
- j) Front and rear suspension system shall be of heavy duty with alloy wheels having tubeless radial tyres. Air suspension shall be provided for rear axles. A spare wheel and tyre with carrier shall be provided.
- k) There shall be sufficient storage cabinets inside the control compartment for keeping operational spare parts and consumables of each System. All cupboard doors shall be fitted with good quality flush handle slam locks.
- l) Side/rear retractable stair/steps with detachable handrail should be provided with an independent visual warning system on the dashboard in the driver cab to inform the driver about the status: extended or stowed. Safety side guard bars should be fitted on the underside of the vehicle as per the Regulation. Effective and adequate toe board, railing and fence, fixed/foldable type, should be provided and mounted around the top edges of the rear body for maintenance purpose.
- m) The vehicle should be equipped with a tool box for first level maintenance needs. The vehicle shall be equipped with an anti-theft system.
- n) All electrical accessories shall be provided with full radio interference suppression and these shall be tropicalised. Details of electrical accessories shall be provided.
- o) Factory standard rust-proofing treatment should be applied on the driver cab interior and under chassis. The chassis should be painted with a suitable protective primer prior to fitting the body.

- p) The vehicle and mounted equipment should have a safety system that minimizes the risk of scanner being damaged by containers/trucks that are too high, too wide or wrongly positioned. The features of such provisions shall be provided in the offer.
- q) Additionally, the vehicle will be provided with:
 - (i) A set of master key and three sets of duplicate keys for the doors of all storage cabinets, compartments, external locks, etc.
 - (ii) Fire extinguishers with valid certificates from local authority and mounted at the control compartment; and at each equipment compartment(s).
 - (iii) An anti-static device properly installed at the rear of the System.
 - (iv) Detachable protective screens, of suitable design and material, on outside of windscreen, headlamps, directional lamps, windows etc.
 - (v) A pair of fog lights, tail/stop lamps, amber turn signal lights, etc. properly fitted and wired.
 - (vi) Reverse warning light, buzzer and distance sensor interlocked to turn on with reverse gear in operation.
 - (vii) Surface mounted flashing red lights installed on front and rear, at mid-level of the body, and at the detector boom.
 - (viii) Auxiliary batteries to power radio communications network, beacon lights, siren/PA system, interior lights, emergency lights, CCTV systems, etc.; cabin/ compartments' interior lights; operators' desk lights etc.
 - (ix) Adequate numbers of weather proof (IP65) switched sockets properly fitted and wired up inside the control compartment for portable equipment.

IMAGE PROCESSING SOFTWARE

4.61 The detection of materials as specified in the manifest shall be reflected in the quality of image that the operator sees on the screen and shall indicate correct shapes, density as attenuation of signals. Features available to operator should enable him to perform various functions through simple menus. It is essential that the ergonomics should be so as to avoid fatigue, strain on operators' vision and ensure ease of performance. A few of the requirements are highlighted here and shall be available on each workstation supplied. Bidder should elaborate all such features, functions that can be performed by operators.

- a) Zoom-in (up to 16 X) zoom-out (1/4th), pan, scroll, density expands, edge enhancement, reverse video, brightness & contrast adjustment, etc.
- b) Pseudo coloring (at least 16 pseudo colour).
- c) ROI (Region of Interest) processing.
- d) Original image and processed image - to allow attending operator to alternate between the original and processed images in the same window.
- e) Negative and positive image toggling.
- f) Filtering functions.
- g) Gray scale re-mapping and adjustment.
- h) Shape marking or text annotations, highlighting suspicious area, ruler function to mark & measure the area of suspicion.
- i) Histogram- liner, non-liner defined functions.
- j) GUI- menu bar, tool bar, in-put window, main inspection window, whole scan image window, etc.
- k) Image depth-16 bits (min.).

Note: The above features shall be available on each workstation supplied.

4.62 The operating system of the Workstation(s) should be in robust design for 24 x 7 x 365 days

operations and LINUX, Windows Server, or equivalent platform with latest version of OS shall be used. The application software should perform the following tasks:

- a) Acquisition of X-ray images;
- b) Monitoring of the real-time system status;
- c) Monitoring of the operational status;
- d) Database management;
- e) Printing and event logging;
- f) Data archiving;
- g) Export of image files (on site, central location);
- h) System initialization;
- i) System self-diagnostics;
- j) System security;
- k) Data communication / networking with the remote image interpretation system;
- l) Local and remote image interpretation functions; and
- m) Connectivity to Purchaser's EDI system for data/ image retrieval and processing.

4.63 Image conversion tools shall be provided for converting X-ray images into JPEG format. Images shall be automatically generated and stored on the LAN/System server for review at other Workstations. The image conversion tools shall also convert X-ray images to other common file formats, such as PDF, TIFF, BMP.

DATA/IMAGE PROCESSING HARDWARE

4.64 All data and images must be archived on a unified storage, processing platform enabling them to be processed on any of the work station irrespective of the device used for scanning. The provisions as below should be provided and Bidder should provide detailed specifications for the same:

- a) There shall be two Image Analysis Stations (one in the Vehicle and another in Supervisor's office at the site) and provision to add at least two more (for remote location inspection). Each work station should be equipped with image analysis/ analytics, data management software, etc.
- b) Each work station shall be supplied such that the Inspectors perform independent inspection activities, simultaneously or sequentially. The Workstation shall utilize and display 16-bit image data.
- c) Servers & Workstations should be of state-of-the-art and the operating system should be based on latest version of LINUX/Microsoft Windows or an equivalent or superior multi-tasking operating system supported internationally.
- d) Monitors should be 24" flat LCD (TFT) colour having resolution 1920X 1080 or better.
- e) Printer should include an A3/A4 (regular) format coloured laser printer, as well as software which will allow printing snap by control system displays, image analysis outputs, video capture shots, notes, manifest etc. It should have multifunction capability such as scanner, copier, etc.
- f) The hard disks of the System Control Workstation and Image Analysis Workstation shall be of a suitable level of Redundant Array of Independent Disk (RAID) configuration providing fast data access and retrieval and full data redundancy and protection against loss or corruption of data, and shall be capable of storing the scanning records information for at least 20,000 containers (including all images, date, time, information of operators, information of the scanned vehicle and goods, findings and comments made by the operators on the images).
- g) Image viewing with limited processing facility should be provided at distant Container Freight Stations (CFSs)/Inland Container Depot (ICDs). Bidder may include unit cost of providing such software features at CFSs /ICDs.

NETWORKING

4.65 An independent local area network(s) complete with hot standby servers, which shall link the X-ray System and Workstations to facilitate the sharing of images, shall be provided. The servers shall be provided with a power fail safe and restart feature. There shall be no loss of system memory on power failure at the central processing unit.

4.66 The images from the respective system shall be sent wirelessly and automatically to Image Analysis Workstation at the adjacent Supervisor's office and shall not affect the operation of the local system. Supervisor's office shall then be connected to the Server of local Custom House through optical fibre cable or wireless license-free high capacity data link for receiving IMG file and for transport of scanned images. Provision for all communication equipment, cables and associated software shall be made by the Bidder. Satisfactory security protocol shall also be established.

4.67 The capacity of the LAN/Server shall be adequate for real-time transmission of the images while scanning is being conducted simultaneously. The data transmission of the LAN/Server shall be bi-directional.

4.68 Additionally, the Supplier shall ensure images are made available and accessible from the local server to a centrally located server (to identified by the Purchaser as per the requirements of the Customs) via a redundant secured communication link of 16 Mbps and above (to be provided and maintained by the Supplier) to facilitate the images being shared with other counterparts within the country, through an approved telecommunication provider of such services. All associated equipment required for connectivity (such as switches as per specifications shared by DG systems) to be provisioned and maintained by the supplier. For architecture and requirements on container scanner connectivity to Customs' EDI network, also refer Annexure – V.

4.69 System should be able to receive IGM information in respect of the containers being scanned from the Purchasers' EDI network and display it along with the image so that the operator can compare the image with the data and draw his conclusions.

4.70 System should permit export of the image as a .pdf or .jpeg or .tiff file to the Purchaser's computer or hand held devices, in a pre-defined folder for further processing in the Purchaser's systems. System should enable remote login with full functionality into the server by officers from anywhere in the country. The viewing of the image at the remote workstation will be user selectable.

DATA MANAGEMENT, STORAGE, BACK-UP/RECOVERY

4.71 Data management servers (DMSs) of adequate capacity should be provided to enable connectivity between the sites of scanner installation and central location for storage, retrieval and processing of image as required by the Purchaser. Details of data management system should be submitted.

4.72 It must be possible to store information about at least 10,00,000 scanned objects (i.e. scanned images, cargo manifests, notes, etc. associated with an inspected object) at each site of installation before transport the information to the central server. It should be able to generate a warning when the storage medium, used to store data sets, reaches a set value of its maximum storage capacity.

4.73 Data back-up and recovery facility should be independent from the process of collecting image data. All data and analytical results shall be secured with three levels of user access control viz. operator, supervisor, and administrator.

4.74 System should have electronic data management, image & data transmission, archival and reporting features. All transaction that occur within the System must be logged on to an audit trail for future reference.

CARGO VIEWING

4.75 System should be provided with suitable software, which would enable the image interpreter to interpret the content of the goods stuffed in the container. The software should be able to discriminate images of various goods/ commodities, which would enable interpreters to make fair assessment of the goods contained in the containers.

4.76 System should be able to target specific commodities (e.g. gold, silver, arms & ammunition, drugs & narcotics, cigarettes), and should alert the operator in case of the targeted commodity is encountered during scanning. (Provisions to achieve the above should be brought out in the Technical Bid and demonstrated in FAT)

4.77 Scanner system should be equipped with standard library of 'suspect' and 'non-suspect' images to assist the analysts in image interpretation and should have provision to add scanned images obtained during the operation of the system.

4.78 The software should have function to combine a suspicious marked image, inspector's comments and cargo information data from the database of the Purchaser. These data files to be saved in a central server, which can be searched, retrieved and processed.

SOFTWARE & SOFTWARE UPGRADE

4.79 Copies of as-built software in executable code that are installed in the system at all levels should be provided.

4.80 It shall be possible to customize some portion of software to meet specific operational requirements, when arise, of the Purchaser.

4.81 Supplier should guarantee the supply of software upgrades for the service life of the scanner. Commercial image processing software, if used, should be provided with each set of the image analysis workstation. Any software upgrades developed by the Supplier during the warranty and the post warranty period should also be made available promptly, installed and operators trained with software upgrades.

RADIATION MONITORING AND ALARM SYSTEM

4.82 Mobile X-ray Container Scanner System must comply with the regulations of Atomic Energy Regulatory Board (AERB) of India and the tenderer shall produce a no objection certificate (NOC) from AERB along with the offer or prior to completion of technical evaluation of the tender. The Bidder shall describe the minimum operating area and required minimum exclusion area at one (1) μSv and two (2) μSv level dose rates. Radiation measurements shall be conducted on a line-up (4 – 6 numbers) of containers and shall be as per the procedure approved by AERB. Radiation dose at the boundary of radiation exclusion zone shall not exceed the limit prescribed by AERB for X-ray based mobile container scanner facility.

4.83 The Contractor shall provide a complete Radiation Monitoring and Alarm System comprising ion chamber radiation detectors, audible and visual alarms and connection to the X-ray System for emergency shut-off. Audible or visual alarm shall triggered if the measured radiation dose exceeds a pre-set level programmed by the operators. Dosimeter shall trip the X-ray System when it detects alarm-level dosage has exceeded the limits and shall require manual reset before the System can resume operation. Bidder to provide details of Radiation Monitoring and Alarm System.

4.84 Scanning operation should be safe for food, vegetables, pharmaceuticals, clothing, active medical supplies, electronic data media, or other commonly traded goods. Dose on cargo per Scanning shall not exceed 50 μ Sv (5mR) measured at the centre of testing position.

4.85 The System should be supplied with three (3) sets of radiation survey meters (ion chamber type) per site of installation, which should be able to measure with sufficient accuracy the dose rates (range 0.01 μ Sv/hr. to 10 mSv/hr.) arising from pulsed radiation fields and should not get saturated / paralysed in high radiation field. The survey meters should be calibrated for ambient dose equivalent. Bidder to provide detailed specifications of the survey meter.

4.86 A total of six (6) sets of calibrated portable dosimeters shall be provided for the individual operators to wear during the operation of the System for personal X-ray radiation monitoring at each site of System installation. Personal dosimeter shall be useful in the energy range 20 keV to 8 MeV, dose rate range from 0.01 μ Sv/hr. to 10 Sv/hr, and accuracies better than ± 15 -20% in the 3-6 MeV range. Bidder to provide detailed specifications of the personal dosimeter.

SECURITY, SURVEILLANCE & COMMUNICATION

4.87 An IP-based CCTV system (for indoor & outdoor applications) shall be installed to monitor the surrounding areas of the Vehicle, including the detector boom, for safety purposes with NVR capable of saving more than 30 days long video images. The Bidder shall provide detailed specification the CCTV system, including cameras.

4.88 Two colour monitors of 32" or above, each connected with all necessary multiplexer(s) and split screen device(s) (installed in the control compartment) individually capable of simultaneous or sequential viewing of the pictures of all cameras or any single camera, should be available with the System. CCTV system to monitor the vehicle reversing movement shall also be provided.

4.89 Public address system shall be installed in the driver's cabin. Weather-proof outdoor speaker of IP65 rating and push-to-talk handheld microphone shall be provided each on the operators' desk and driver cabin. In addition, five sets of walkie-talkie shall be provided for each site of installation to communicate between the operators' in the vehicle, supervisors in the site office & traffic marshal on the ground. Supplier should secure and provide radiation warning signs, electrically operated boom-barrier for controlled movement of truck-trailers, etc.

4.90 As a part of boundary management, entire site and its perimeter will be kept under CCTV surveillance (with suitable number of cameras) with recording facility for 30 days and the same shall be provided by the Bidder. This system will be installed in supervisors' office.

WEIGH BRIDGE

4.91 An electronic weigh bridge, capable of weighing up to 70 MT, within an accuracy of ± 1 %, should be provided. Measured weight should be electronically displayed with container IGM data and in turn with image obtain during scanning operation. Bidder shall obtain and maintain an annual calibration licence from the local competent authority for the weigh-bridge.

UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM & BATTERY BACKUP

4.92 All Workstation(s) and the X-ray System LAN/Server and associated hardware, control electronics,

communication hardware and the peripheral devices, shall be supported by a true on-line, double-conversion UPS system of sufficient ratings complete with backup batteries for a minimum backup time of 30 minutes. The transfer time shall be zero seconds. Make & model along with the proposed rating, technical specifications and compliance to relevant BIS specification should be provided.

4.93 The backup batteries shall be rechargeable and of heavy-duty, maintenance-free and fully sealed lead acid type with a guaranteed serviceable life of 10 years or above. The make & model along with the proposed rating and technical specifications and compliance to relevant BIS specification should be provided.

PROVISIONS AT SITE

4.94 The MXCS and its associated systems/ equipment shall be able to fit into and operate within the maximum available area of 180 meters long x 45 meters wide. This will include exclusion zone, supervisors' office, maintenance shade, weigh-bridge, etc.

4.95 A suitable shed (approximately 20 M long x 10.50 M wide x 6 M high) based on the size of equipment, will be constructed at an appropriate location at the site by the Bidder, which will be used for parking as well as for servicing and repair of the equipment. It will be a RCC framed structure with RCC roof and side panels. Water supply, storm water drainage, soak pit and septic tank along with connecting sewer lines, etc. will also be provide. Bidder shall indicate his bid specific requirements, if any, in this regard.

4.96 A 'Schematic Arrangement Drawing' for the site and the shed is provided in Appendix – III. The Bidder may suggest alternate arrangement in his Technical Bid which meets various requirements mentioned in this tender document.

4.97 The supervisors and additional inspectors will function from minimum two (2) numbers of adequately sized lift and shift type pre-fabricated offices which will be supplied by the Bidder. The material of construction of these units shall be good quality carbon steel of adequate thickness and shall be designed to relevant Indian Standards. Each units shall be fully insulated with Rock wool/ Mineral wool/ equivalent with insulation on all side walls and on roof aesthetically finished with internal decorative laminated panelling, false ceiling with PVC Vinyl flooring with main door, powder coated aluminium sliding windows, with toilet along with E.W.C., flush tank, wash basin and mirror with power/socket points, tube light fittings, mains incoming weatherproof junction box with metal clad plug and sockets, pantry provision etc. Duly painted each unit should be complete in all aspects with false ceiling, air-conditioners, ready to use with furniture & fixtures, etc. Each unit shall have suitably mounted Fire extinguishers with valid certificates from local authority. Bidder shall include the specifications of the pre-fabricated office along with the detailed drawings in his bid.

QUALITY CONTROL REQUIREMENTS

4.98 All materials, components, equipment and system covered under this Specification/ Tender shall be designed, procured, manufactured, erected, commissioned and tested at all the stages, as per a comprehensive Quality Assurance Program, inspections and tests at works including shop inspection. Performance tests and test at site for all equipment and systems shall be as per respective codes and standards and also as required by the specification.

4.99 In order to ensure the quality of the Mobile X-ray Container Scanner System and site preparation works, the following inspection & tests shall be conducted. The Scanner will be accepted only after their successful completion.

- a) Factory Acceptance Tests (FAT) for Scanner System
- b) Site Acceptance Tests (SAT) for Scanner System
- c) Facility Inspection & Acceptance (excluding of Mobile X-ray Container Scanner System)
- d) Tests and Trials

FACTORY ACCEPTANCE TESTS (FAT)

4.100 The Supplier shall provide within two months of the notification of award, a FAT document detailing the manner in which the FAT will be conducted and how each of the parameters will be checked. The Supplier shall provide the equipment, instruments, test jigs, etc., and make all necessary arrangements for conducting the FAT at his own cost. Supplier or its subcontractor(s) shall provide all reasonable facilities and assistance, including access to relevant drawings, design details and production data, to the Purchaser's inspectors at no charge to the Purchaser. Four (04) representatives of the Purchaser will participate in the factory acceptance tests on each MXCS ordered. The cost of travel, board and lodge for Purchaser's representatives shall be borne by the Purchaser. The following steps will be followed in conducting the FAT.

- a) The Purchaser shall make all FAT Documents available for review within two months of the notification of award. The documents shall provide details the inspection and tests to be conducted, including the procedures for conducting the same, and where these will be conducted. It should describe how each parameter of the Mobile X-ray Container Scanner System will be checked for conformity with the specified requirements.
- b) Supplier shall provide all duly calibrated equipment, instruments & jigs/ devices, software & hardware modules, etc. and make all necessary arrangements for conducting the FAT. It is the responsibility of the Supplier to organise the agreed number of test cargo viz. a set of densely loaded containers, lightly loaded containers, mixed cargo, suitable simulants for narcotics, arms, explosives, etc.
- c) Documents in respect of all QA and QC, inspection reports of assemblies, sub-assemblies, components, type/ routine tests, etc. carried out during/ after manufacture shall be made available to the Purchasers' representatives to ensure that the system meets the Purchasers' requirements/ complies with industrial standards for these classes of Systems. All materials supplied or used in the manufacturing shall be new and accompanied by valid and approved materials certificates, tests and inspection reports. Supplier in consultation with Purchaser shall provide at least ten (10) reference/test articles for inspection and record their images, which will also be used during on-site trials.
- d) FAT shall be conducted as per the agreed document. FAT shall include the system as a whole, including through-put and radiation measurements. However, if agreed by the Purchaser in writing, for any specific reason, the Supplier may undertake to offer a few major sub-systems for FAT, in such a way that it possible to control the system in total. Representatives of the Purchaser will, within 10 days from the date of FAT, give notice in writing to the Bidder of any deficiency in meeting the tender requirements or in any specification / parameter of the equipment and workmanship, which in his opinion is not in accordance with the contract. The Supplier shall give due consideration to such deficiencies and shall either make the modification that may be necessary to meet the said observations or shall confirm in writing to the Purchaser that no modifications are necessary to comply with the contract.
- e) The Supplier shall resubmit such goods to the Purchaser's inspectors for conducting re-inspection/ re-test. If the scanner or its sub-systems fail to conform to the required specifications and standards, the Purchaser's inspector may reject them and the Supplier shall either replace the rejected goods or make alterations necessary to meet the specifications and standards, as required, free of cost to the Purchaser.
- f) Purchaser's contractual right to inspect, test and, if necessary, reject the goods after the goods' arrival

at the final destination shall have no bearing of the fact that the goods have previously been inspected and cleared by Purchaser's inspectors during pre-despatch inspection i.e. FAT.

- g) Supplier shall despatch the Mobile X-ray Container Scanner System or its sub-system (in case partial FAT has been agreed upon) only after obtaining the specific advice of the Purchaser in writing once FAT has been carried out and goods have been accepted by the Purchaser, in writing, after resolving the deficiencies communicated if any.

SITE ACCEPTANCE TESTS (SAT)

4.101 The Supplier shall submit within four months of the notification of award, SAT document detailing the manner in which the SAT will be conducted and how each of the parameters will be checked for conformity with the specified requirements. After installing and commissioning the MXCS System, the Supplier shall intimate to the Purchaser the dates for SAT at least one month in advance. The Supplier shall provide the equipment, instruments, test jigs, etc., and make all necessary arrangements for conducting the SAT at his own cost. However, the cost of travel, board and lodging of the representatives of the Purchaser will be borne by the Purchaser. The Supplier, in co-ordination with the Purchaser shall carry out SAT to verify that the equipment fulfils the specifications according to the Contract Document and the Tender Specifications. The following steps will be followed in conducting the SAT.

- a) All sites works and services should have been completed as per the requirements of specifications & standards and should have been inspected and accepted for installation of the MXCS System as a pre-requisite for conducting SAT.
- b) Supplier shall provide all duly calibrated equipment, instruments & jigs, software & hardware modules, etc. and make all necessary arrangements for conducting the SAT. However, it will be the responsibility of the Purchaser to organise necessary test cargo viz. a set of densely loaded containers, lightly loaded containers, mixed cargo, suitable simulants for narcotics, arms, explosives, etc. Supplier in consultation with Purchaser shall provide at least ten (10) reference/test articles for inspection and record their images, which will be used during on-site trials.
- c) Entire installation shall be secured properly and as per agreed plan. Supplier shall also ensure availability of software, hardware and other modules. All shortfalls in the installation should be fixed before conducting the functionality test. Purchaser will have right to demand a new installation test, if found unsatisfactory. The result of this test should be documented.
- d) Functionality test will be an integrated test to confirm that the system, as whole including safety interlocks, is working properly and according to specification after delivery and installation the site. Functionality test may, if desired by the Purchaser, include the same elements as in FAT, or other elements mutually agreed upon. Supplier shall conduct imaging with at least ten (10) test articles as well as actual (live) cargo to be coordinated with and approved by the Purchaser. If the test is set aside, the Supplier will be permitted to repeat the test three times after modifications.
- e) Purchaser interfaces test will be conducted to review the Purchaser interface for the system together with representatives (operators & image interpreters) of the Purchaser. It will require making checklists and evaluate every screen shot and dialog box. The test is to verify the user friendliness of control and imaging software. Observations should be logged and if required adjustments should be made and noted. This will also test the connectivity of the Supplier's system to the Purchaser's EDI system and transport of the images to the Purchaser's network for review and interpretation at off-site locations. The result of this test should be documented.
- f) Supplier will be responsible for planning and working out all the tests. The documentation check test should include test plans and test cases for the system documentation that is relevant for the daily use. This test shall confirm that the documentation contain information relevant for implementing the system. The result of this test should be documented.

FACILITY INSPECTION & ACCEPTANCE (EXCLUDING SCANNER SYSTEM)

4.102 The Facility acceptance shall be carried out after successful completion of all tests in respect of Scanner and shall include:

- a) Physical inspection of the Facility for quality & completeness of all works.
- b) Review of quality assurance & inspection reports generated during construction.
- c) Functioning of PH systems, storm water drainage, service water supply, etc.
- d) Functioning of fire detection, mitigation and fighting systems.
- e) Functioning of electrical systems and fittings & fixtures, air- conditioning & ventilation equipment, boom barriers, IR sensors, etc.
- f) Functioning of communication network, surveillance system, etc.
- g) Functioning of Weigh-bridge, UPS, etc.
- h) Review of all 'As-built' drawings and QA reports.

TEST & TRIALS

4.103 After successful completion of all tests and inspections, MXCS System shall be at the Purchaser's disposal for a trial period of 30 days.

4.104 During trial period the Purchaser will operate the system. If the Mobile X-ray Container Scanner System works in accordance with the agreed specifications and without faults or malfunctions. If any fault or malfunctions are noted, the same shall be rectified and a further trial period of one month (30 days) shall be added to permit an additional attempt to meet contract specifications. For this extension of one month, the warranty period would be extended by two months. Only one extension of one month shall be granted. If the functioning of the system is not faultless in this extended period, no further extension shall be granted and the contract shall be liable for cancellation. The decision of the Purchaser in this regard shall be final and binding on the Bidder.

4.105 Purchaser shall in no case be responsible for any loss of damage that may occur to the rejected stores while these are in its premises.

FINAL ACCEPTANCE/ COMPLETION OF WORK

4.106 On satisfactory completion of trials Completion of Work shall be effected by the Purchaser as follows:

- a) MXCS System will be handed over to the Purchaser by the Supplier after commissioning with all the specified certificates, free of recommendations and remarks, at the location of installation.
- b) The Purchaser will take delivery of the MXCS System and sign the Delivery & Acceptance Certificate.
- c) Acceptance of the MXCS System by the Purchaser shall be subject to receipt by the Purchaser of the following documents (soft & hard copies) and items from the Supplier:
 - (i) Record of inspection, tests & trials of the MXCS System including test reports review documents submitted/ accepted during FAT and SAT;
 - (ii) Record of inventory of the equipment of the MXCS System .This includes, besides the delivery of MXCS and its associated systems required for operation, all the accessories and tools, fixtures, test equipment, etc. required for maintenance or calibration purposes. The inventory shall also include all computer based systems such as servers, workstations, printers, terminals, communication systems & components, operating and application software and other hardware & software mentioned in FAT and SAT;
 - (iii) Scanning system manuals, operation & maintenance manuals and operating manuals for other equipment, drawings and plans pertaining to the MXCS System as stipulated in the

- specifications;
- (iv) Copy all applications / correspondence made with AERB or any other statutory authority and their approvals / correspondences including stipulations for operations within the site of installation and in public;
 - (v) Declaration of Warranty of the Supplier that the Mobile X-ray Container Scanner System is/ are delivered to the Purchaser free and clear of any liens, charges, claims, mortgages, or other encumbrances upon the Purchaser 's title thereto, and in particular, that the Systems is/ are absolutely free of all burdens in the nature of imposts, taxes or charges imposed by the prefecture or country of the port of delivery, as well as of all liabilities of the Supplier to its sub-contractor, employees and of all liabilities including those of third parties arising from the operation of Systems, in trials, or otherwise, prior to delivery. The Supplier further covenants to save the Purchaser harmless from any and all claims, suits, actions or other legal proceedings that might arise from any one or all of the aforementioned causes that might be brought against the Purchaser.

PERIODIC QUALITY ASSURANCE CHECKS/TESTS & SURVEILLANCE

4.107 Once the Scanner System is put under regular operation, it shall undergo periodic quality assurance checks/tests to ensure that the system/ sub-systems, safety features & interlocks, surveillance instruments, etc., are working as per the requisite specifications and design intent. Regular surveys of radiation field/ dose rates shall have to be made to ascertain that these are not exceeding the limits prescribed by AERB.

4.108 The periodicity of such checks/ tests/ surveillance will be decided based on the system/sub-system/ instrument involved or as prescribed by the Regulator. (Bidder, if so desire, may propose the item-wise periodicity of quality assurance checks/tests and surveillance in his bid).

SECTION 5

PRICE SCHEDULE

Important Notice:

1. **The bidders should submit their financial bids in this format for individual site of installation.**
2. **The bidder must quote for Mobile X-ray Container Scanner Systems required for all the sites of installation.**
3. **The bidder should quote for individual site of installation Mobile X-ray Container Scanner**

PART - I : PRICE SCHEDULE

S. No.	Detail of cost	Site of Installation				
		KoPT	ChPT	CoPT	BMCT	MPT
1.	Cost of MXCS (including insurance and freight) in INR or any free convertible currency (indicate the currency)					
2.	Any other charges up to the stage of landing/delivery (to be specified), if any, (INR or any freely convertible currency) (indicate the currency)					
3.	Total landed cost (INR or any freely convertible currency) (indicate the currency)					
4.	Installation and Commissioning charges, if any, in INR					
5.	Customs Duty in INR					
6.	GST, applicable if any, in INR					
7.	GST, if any, on installation and commissioning charges in INR					
8.	Any other cost/ charges (to be specified), if any, in INR					
9.	Any other taxes, levies(to be specified), if any, in INR					
10.	Commission to Agent, if any, in INR					
11.	Total Cost of MXCS (INR or INR+ freely convertible currency)					
12.	Cost of site preparation works & site services for MXCS, in INR					
13.	GRAND TOTAL (INR or INR + free convertible currency)					

PART - II : CCAMC

All amounts in INR

Year of CAMC	KoPT			ChPT			CoPT			BMCT			MPT		
	Cost of CAMC	GST	Total cost of CAMC	Cost of CAMC	GST	Total cost of CAMC	Cost of CAMC	GST	Total cost of CAMC	Cost of CAMC	GST	Total cost of CAMC	Cost of CAMC	GST	Total cost of CAMC
1 st															
2 nd															
3 rd															
4 th															
5 th															
6 th															
7 th															
8 th															
Grand Total															

PART - III

FORM 13-UNFORESEEN ALTERATIONS/ ADDITIONS

Schedule of Quantities and Rates

S.No.	Description	Quantity	Rate * (in figures and words)	Unit	Amount
	Any item of work altered /added in civil Structural, Public health & electrical works after finalisation of work order, which may be required during execution, based on Delhi Schedule of Rates 2019 of CPWD (or as amended)	As required	@ ____% (* above/below/at par rates Delhi Schedule of Rates 2019 of CPWD	Rs	

* **Strikeout whichever not applicable.**

Note: Additional costs/ reduction of charges(if any) in any item, ordered in writing during construction will be derived by calculating the difference of rates of old and new items based on the above quoted percentage.

SECTION 6
DRAFT CONTRACT

Contract between Principal Commissioner, Directorate of Logistics, Customs and Indirect Taxes, New Delhi , on behalf of the President of India and M/s.....for supply (including site works& services), delivery, installation, commissioning, training, warranty & post-warranty maintenance of X-ray based Mobile Container Scanner Systems at: (i) BMCT (JNPT), Uran District, Maharashtra, (ii) KoPT, at Haldia (iii) ChPT, Chennai, (iv) CoPT, Cochin, Kerala, and (v) Marmagoa Port Trust, Goa, in India on turnkey basis.

Whereas the Principal Commissioner, Directorate of Logistics, Customs and Indirect Taxes, 4th Floor, A Wing, Lok Nayak Bhawan, Khan Market, New Delhi (hereinafter referred to as the Purchaser) has published, on behalf of the President of India, e-Tender No.: inviting tenders for supplying (including site works& services), installing, commissioning of X-ray based Mobile container scanner on turnkey basis and, maintaining it during warranty period and maintaining it on Comprehensive Annual Maintenance Contract after the warranty period and providing comprehensive training and product support;

Whereas M/s..... (Hereinafter referred to as the Supplier) had, in response, submitted his tender;

Whereas the Purchaser accepted the tender of the Supplier and issued him a notification of award vide _____ dated _____;

Now, therefore, it is agreed as follows:

1. The Supplier will supply goods and services as given in para 4 below in consideration of which, the Purchaser will pay him amounts as given in para 5 below.
2. This contract will be subject to the Conditions of Contract which are laid down in Section 2 of e-Tender _____ of the enclosed Tender Document.
3. The following documents will be read with and will be construed as part of this contract:
 - i. Purchaser's e-Tender No.: and the Tender Document
 - ii. Purchaser's pre-bid clarifications issued vide F.No.....
 - iii. Supplier's tender submitted vide
 - iv. Clarifications furnished by Supplier.....
 - v.
 - vi.

Goods and Services to be supplied

4. The Supplier shall supply the following goods and services:
 - (i) Supply, deliver, install and commission MXCS System and associated systems/equipment;
 - (ii) Carrying out site preparation works and providing site related services;
 - (iii) Obtaining regulatory and statutory clearances;
 - (iv) Training of staff of user Commissionerate in the operation MXCS and in comprehensive image analysis during warranty and post-warranty period;
 - (v) Maintenance of the MXCS System for two years under warranty including supply of spare parts and consumables;
 - (vi) Comprehensive Annual Maintenance under a contract (hereinafter referred to as CAMC) including supply of spare parts and consumables for a period of eight years after completion of warranty period of two years;
 - (vii) Product Support for fifteen years after two years' warranty period;

(viii) Provide upgrades from time to time.

Stages and method of payment

5. The Purchaser will pay the Supplier the following amounts if the Supplier completes the work at each stage and produces billing documents.

Sl. No.	Stage	Payment	Billing documents which the Supplier has to submit
1.	Advance(on request from the Supplier)	*Up to 20% of ex-duty/ tax cost (as soon as possible after signing the Contract)	1. Claim as per Form 9. 2. Evidence that the Supplier has given the performance security. 3. Supplier's commercial invoice in quadruplicate. 4. Bank Guarantee for 110% of the amount sought as advance.
2.	Upon satisfactory completion of Factory Acceptance Tests & receipt of MXCS at the site of installation	*60% of the ex-duty/tax cost, minus advance paid, if any	1. Claim as per Form 9. 2. Supplier's commercial invoice in quadruplicate. 3. Receipt at Site Certificate issued by the user Commissionerate in Form 7A.
3.	Upon completion of installation & commissioning of MXCS	*20% of the ex-duty/tax cost	1. Claim as per Form 9. 2. Supplier's commercial invoice in quadruplicate. 3. Submission of installation & commissioning Certificate issued by the Purchaser in Form 7.
4.	Upon completion of site trials and handing over of MXCS	*20% of the ex-duty/tax cost	1. Claim as per Form 9. 2. Supplier's commercial invoice in quadruplicate. 3. Certificate of delivery and acceptance of MXCS issued by the Purchaser in Form 8. 4. Bank Guarantee for warranty performance as per Clause 2.9, Section 2.
5.	Duties, taxes and levies, as applicable	100% on payment, as and when made	1. Claim as per Form 9. 2. Supplier's commercial invoice in quadruplicate. 3. Documents showing evidence of payment of duty/ taxes

* part of the contract price not in Indian Rupees will be converted at the exchange rates established by the State Bank of India for similar transactions, as on the date of release of payment.

6. Other clauses on quality assurance, inspection & tests, delivery, liquidated damage, termination, arbitration, resolution of disputes, etc., as mentioned in tender documents, shall also be specially mentioned in the contract.

Signed on day of (month) Two thousand and _____ in New Delhi.

(xxxxx)	(xxxxxxxxxx)
For Supplier	For Purchaser Principal Commissioner, Directorate of Logistics
(xxxxx)	(xxxxx)
Witness	Witness

STANDARD FORMS

FORM 1- TENDER FORM

*Please read the following INSTRUCTIONS carefully before filling up the form
(To be duly filled, signed and submitted with Technical Bid)*

1. Tenderer must obtain and/or download and carefully examine the above Global Notice Inviting Tender and the Tender document, including amendments, if any, and unconditionally agree to all the terms and conditions indicated in the tender enquiry documents and subsequent amendments. This tender form duly filled and signed must be submitted along with the Technical Bid.
2. The copy of the Tender Document and amendments retained in the records of the Purchaser shall be deemed authentic in case of any dispute at any stage.
3. The following tenders shall be ignored:
 - a) Tenders submitted by those who do not meet the eligibility and qualification criteria;
 - b) Tenders sent by fax/telex/cable/email/ hand delivery;
 - c) Tenders that do not meet the basic requirements;
 - d) Tenders which have minor infirmities/irregularities and the tenderer does not respond to clarifications sought by the Purchaser within the time specified by him;
 - e) Tenders where, in the opinion of the Purchaser , there is an arithmetical inaccuracy in the price bid and the tenderer does not agree with the Purchaser ;
 - f) Incomplete tenders and not accompanied by duly filled and signed Tender Form;
 - g) Tenders received without the EMD and tender fee.
4. Any tender may be rejected, if:
 - a) The bid price is directly or indirectly indicated in the technical bid;
 - b) Tenderer fails to provide required information or provide incorrect information or gives evasive reply to the Purchaser 's queries or modify the tender or resileor fail to comply with the instructions in the Tender Document;
 - c) The prices are not quoted in the manner indicated in the Tender Document;
 - d) If serious unbalanced price bids are noted for different Port locations;
 - e) Tender validity is for less than 270 days from the date of opening of tenders as indicated in the Tender Document;
 - f) On verification, the data/credentials furnished by the tenderer are found to be incorrect or any adverse report on requisite financial condition has come to the knowledge of the Purchaser ;
 - g) Tenderer attempts to influence the Purchaser 's decision during scrutiny, comparison and evaluation of tenders and award of contract;
 - h) Tenderer is disqualified on the grounds of national security or public interest.
5. Purchaser is not bound to accept the lowest or any tender that may be received against the above-referred tender enquiry.
6. Purchaser may accept any tender at any time before the date of expiry of its validity indicated in the tender form or any date up to which its validity is further extended by the tenderer.
7. Until a contract is signed, this tender form submitted by the tenderer read with its acceptance by the Purchaser constitutes a binding contract between them.

Having carefully gone through the above instructions, the Tender Notice and the Tender Document, we, M/s _____, the tenderer, agree to all the terms and conditions mentioned in therein and hereby, make the following offer to supply goods and perform services as per the listed requirements, delivery schedule and in conformity with all other conditions in the tender document and amendments thereto. We shall arrange for demonstration, as required, of Mobile X-ray Container Scanner at the place of its field installation as per the convenience of the Purchaser.

TENDERER

1. Name of the tenderer: _____

2. Address: _____
3. E-mail: _____
4. Phone: _____ Fax: _____ Mobile: _____
5. Income Tax Permanent Account Number (PAN): _____
6. Name and designation of the person signing and submitting the bid on behalf of the tenderer

7. Has the person at (6) above been authorised by a Resolution of the Board of Directors of the Tenderer Company to sign and submit this tender? (Yes/No)
8. Has a copy of the Resolution of the Board of Directors been enclosed? (Yes/No)
9. Name and complete address of the Tenderer's bankers:
 - a) _____
 - b) _____

ELIGIBILITY AND QUALIFICATION

10. Do your Business dealings currently stand suspended/ banned by any Ministry/ Department of Govt. of India or any State Government? (Yes/No)
11. Are you applying as:
 - a) Original equipment manufacturer (OEM) or 100% Indian subsidiary (duly incorporated in India as per Companies act) of OEM of the Scanner Systems being offered; or
 - b) Joint venture entity with and authorised by OEM; or
 - c) Other Indian manufacturers of electronics/imaging/security systems who have a long-term agreement (minimum 10 years) with the OEM and authorised by the OEM to submit a tender.
12. If you are applying as (c) in S. No. 11 above, do you have an irrevocable long-term agreement (minimum ten years) with the OEM manufacturer? Yes/No
(If yes, please enclose documents showing terms of transfer of technical know-how or scope of collaboration or service level agreement) Yes/No
13. If you are applying as (b) or (c) in S. No. 11 above, have you enclosed 'Joint Venture Agreement' or 'Long-term agreement' with the OEM and Manufacturer's Authorisation Form? Yes/No
14. Turnover of the tenderer during the past three years (in Rs. Crores)

2016-17 _____

2017-18 _____

2018-19 _____

(Please enclose certified audited published annual accounts and reports. If the accounts are maintained in some other currency, please give the figures in that currency as well as its conversion at the exchange rate on the date of filling up this form. If the accounts are managed calendar year wise, please provide figures for 2016, 2017 and 2018).

15. How many Mobile X-ray Container Scanners have been supplied and installed abroad by you or the OEM during the past three years?*(Please enclose purchaser order copies & other documentary proof).*
16. How many Mobile X-ray container scanners have been installed by you or the OEM which are under actual field operation during the past two years? *(Please enclose purchase order copies & other documentary proof).*
17. To the best of your knowledge, has any other tender been submitted against this Global Notice Inviting Tender (GNIT), for Mobile X-ray Container Scanners from the same OEM? (Yes/No)

18. How many similar electronic, imaging & security systems have been / are being maintained by your proposed 'Maintenance contractor' in India *(Please enclose purchaser order copies & other documentary proof)*.

ORIGINAL EQUIPMENT MANUFACTURER (If you are yourself the OEM, please skip this section)

19. Name of the OEM _____
20. Address of the OEM _____
21. Phone _____
22. Fax _____
23. Email _____

MANUFACTURING COMPANY (WHETHER TENDERER IS THE OEM OR NOT)

24. Does the company manufacturing Mobile X-ray Container Scanners have relevant ISO certification? *(Please enclose copy)*
25. Does the company manufacturing Mobile X-ray container scanner systems have relevant ISO certification to service & maintain these scanner systems?*(Please enclose copy)*

THE OFFER

26. The tender is valid up to _____
27. Make and Model of the Mobile X-ray container scanner being offered _____.
28. Para-wise response to requirements specified in Section -3 and Section -4 of Tender Document. *(Please note mere compliance shall not suffice; please furnish details / clarifications, documents, etc. in support of your offer)*

WARRANTY AND POST WARRANTY MAINTENANCE

29. Do you have set up owned by you in India to provide the maintenance during warranty period and Post-warranty period under CAMC? (Yes/No)
30. If yes, please provide details (in 100 words) including experienced manpower & resources details and enclose relevant documents.
31. If answer to question at 29 above is no, do you have service level agreement with any other manufacturer or entity having previous experience in maintaining scanner systems, to act as Maintenance Contractor to provide maintenance services during warranty and post-warranty period? (Yes/No)
32. If yes, please provide details (in not less than 100 words) and enclose a copy of the agreement, including previous experience and manpower details of the manufacture/entity in maintenance of similar scanner systems/ electronic & imaging systems.

DOCUMENTS TO BE ENCLOSED

33. Have you paid the tender fee of Rs.5, 000/-? (Yes/No)
34. Have you submitted the EMD? (Yes/No)
35. Have you enclosed the following documents? (Yes/No)
a) Scanned copy of the DD/ banker's cheque towards tender fee as submitted in the Purchaser's office (Yes/No)
b) Scanned copy of the Bank Guarantee of Earnest money deposit (EMD);(Yes/No)
c) Documentary evidence to show your eligibility, qualification and capability to provide the goods and services required as per this Tender Document including the establishment to carry out site

- works & services, installation& commissioning, maintenance and product support; (Yes/No)
- d) Documents and relevant details to establish that the goods and the allied services offered conform to the requirement of the tender documents ;(Yes/No)
 - e) Power of Attorney of firm / resolution of Board of Directors of company for person or persons authorized to sign the Tender;(Yes/No)
 - f) Power of Attorney/Authorization letter by the Manufacturer to Indian company/ firm/ representative to represent the Manufacturer in India; (Yes/No)
 - g) Copies of documents defining constitution and legal status of the tenderer;(Yes/No)
 - h) Documents containing detailed agreement with the OEM, clearly bringing-out role, responsibilities & scope of work/services (in the event of a collaborator bidding or long-term agreement);(Yes/No)
 - i) Documents containing the arrangement between the tenderer and the Maintenance contractor, along with the details of previous association with OEM, experience & resourcethe Maintenance contractor possess; (Yes/No)
 - j) Copies of fax messages and letters, if any, sent to and received from the Purchaser during the Tender Period ;(Yes/No/ There are none)
 - k) An undertaking to the effect that the Price bid does not contain any conditions whatsoever of the price demanded for sale; (Yes/No)
 - l) Last three years certified published annual reports showing the turnover and financial results of the company; (Yes/No)
 - m) Documents indicating the past supplies of the proposed scanner system by you or your OEM; (Yes/No)
 - n) Documents indicating maintenance of experience in the past in India; (Yes/No)
 - o) Any other documents/ technical literature that you consider necessary to strengthen your bid; (Yes/ No/ None required).
 - p) An undertaking to the effect that OEM and Tenderer has not been a defaulter in any previous tender or supply in any part of the world and has not been blacklisted in any country; (Yes/No).
 - q) Scanned copy of pre-contract integrity pact signed with the Purchaser (Yes/No).

Signature _____

Company seal

(Name and Designation)

FORM 2 – JOINT VENTURE AGREEMENT

Form 2 (A1): REQUIREMENTS OF JOINT VENTURE

- 1 The Bids submitted by a Joint Venture (JV) entity shall comply with the following requirements:
 - a. There shall be a Joint Venture Agreement between the constituent firms specific for the contract package for which the bids are submitted. The JV Agreement shall include among other things, the joint venture's objectives, the proposed management structures, the proposed distribution of responsibilities both financial as well as technical for execution of the work, the contribution of each partner to joint venture operation, the commitment of partners to the joint and several liability for due performance, recourse/ sanctions within the joint venture in the event of default or withdrawal of any partner and arrangements for providing the required indemnities.
 - b. The most experienced partner shall be the Lead Partner and nominated as the partner-in-charge; and his nomination shall be evidenced by submitting power of attorney signed by the legally authorised signatories of all the partners.
 - c. The most experience partner (Lead Partner) of the joint venture shall provide suitable experienced personnel for at least 3 (three) positions at site for the purpose of general planning, site management and pant operations, during the whole period of contract execution and a statement to this effect should be included in the Joint Venture Agreement.
 - d. The bid, and in the case of the successful bidder, the Form of Agreement, shall be signed and / or executed in such a manner as may be required for making it legally binding on all partners (including operative parts of the ensuing Contract in respect of Agreement of Arbitration, etc.).
 - e. The partner-in-charge shall be authorised to incur liabilities and to receive instructions for and on behalf of the partners of the Joint and entire execution of the Contract including payment shall be carried out exclusively through the partner-in-charge. A Statement to this effect should be included in the Joint Venture Agreement.
 - f. All partners of the Joint Venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms, and a Statement to this effect should be included in the Joint Venture Agreement.
 - g. Bid Security as required can be furnished by any partner but it shall be in the name of Joint venture.
 - h. Performance Guarantee, as required, shall be furnished by all partner(s) , out of their accounts, in proportion of their participation in joint venture.
 - i. Joint Venture Agreement shall contain a clause to the effect that there shall be a separate JV Bank Account (distinct from the Bank Account of the individual partners) to which the individual partners shall contribute their share capital and/or working capital.

- j. Joint Venture Agreement shall also contain a clause to the effect that the financial obligation of the JV shall be discharged through the said JV Bank Account only and also all payment received by JV from the Employer shall be through that account only.
- k. In the event of default by most experienced partner (Lead Partner), it shall be construed as default of the contractor; and Employer shall take action under default clause.
- l. In the event of any partner leaving the JV, it shall be intimated to the Employer within 30 days by other partner(s). Failure to do so shall be construed as default of the contractor and the Employer may take action under default clause.
- m. In case Joint Venture Agreement is not acceptable to The Employer, the Joint Venture shall modify the Agreement so as to be acceptable to the Employer.
- n. The bid submitted shall include all information as required under the provisions of Sub-Clause and furnished separately for each partner.

FORM 2 – JOINT VENTURE AGREEMENT

FORM 2 (A2) : CONDITIONS OF CONTRACT FOR JOINT VENTURE BID

1 Performance Security

In case of Joint Venture, the Bank Guarantee towards Performance Security shall be provided by all the partners of the JV in proportions to their participation in the project as defined in the Joint Venture Agreement along with the proof issued by the said bank in this regard. The local partner(s) alone shall NOT be allowed to deposit the Bank Guarantee on behalf of foreign partner(s) of the Joint Venture.

2 Joint Venture

If a contractor is a joint venture, consortium or other unincorporated group limited to three (including the lead partner) then such joint venture, consortium or other unincorporated group shall be treated as a separate entity distinct from its constituents and competent to enter into contract in its own name and its constituents shall be jointly and severally liable to the Employer for the performance of the Contract and shall comply with the following requirements:

- (a) There shall be a Joint Venture Agreement between the constituent firms specific for the contract packages. The JV Agreement shall include among other things, the joint venture's objectives, the proposed management structure, the proposed distribution of responsibilities both financial as well as technical for execution of the work, the contribution of each partner to the joint venture operation, the commitment of the partners to joint and several liability for due performance, recourse/sanctions within the Joint Venture in the event of default or withdrawal of any partner and arrangements for providing the required indemnities.
- (b) The most experienced partner shall be the Lead Partner and nominated as the partner-in-charge; and this authorization shall be evidenced by submitting a power of attorney signed by the legally authorized signatories of all the partners. The most experienced partner (lead partner) shall be the one defined as such in the communication approving the prequalification.
- (c) The most experienced partner (Lead Partner) of the joint venture shall provide suitable experienced personnel for at least 3(three) positions at site for the purpose of general planning, site management and plant operations, during the whole period of contract execution and a statement to this effect should be included in the Joint Venture Agreement.
- (d) The Form of Agreement shall be signed and/or executed in such a manner as may be required for making it legally binding on all partners (including operative parts of the ensuing Contract in respect of Arbitration Agreement etc.)
- (e) The partner-in-charge shall be authorized to incur liabilities and to receive instructions for and on behalf of all partners of the Joint Venture and the entire execution of the contract including payment shall be carried out exclusively through the partner-in-charge. A statement to this effect should be included in the Joint Venture agreement.
- (f) All partners of the Joint Venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the Joint

Venture Agreement.

- (g) Performance Security, as required, shall be furnished by all partners(s), out of their accounts, in proportion to their participation in joint venture.
- (h) Joint Venture Agreement shall contain a clause to the effect that there shall be separate JV Bank Account (distinct from the Bank Accounts of the individual partners) to which the individual partner shall contribute their share capital and/or working capital.
- (i) Joint Venture Agreement shall also contain a clause to the effect that the financial obligations of the Joint Venture shall be discharged through the said JB Bank Account only and also all the payments received by the Joint Venture from the Employer shall be through that account alone.
- (j) In the event of default by the most experienced partner (Lead Partner), it shall be construed as default of the Contractor; and Employer shall take action under default clause.
- (k) In the event of any other partner leaving the joint venture, it shall be intimated to the Employer within 30 days by the other partner(s). Failure to do so shall be construed as default of the contractor and the Employer may take action under default clause.
- (l) In case the Joint Venture Agreement is not acceptable to the Employer, the joint venture shall modify the agreement so as to be acceptable to the Employer.
- (m) The contractor shall not alter its composition or legal status without the prior written permission of the Employer. Failure to do so shall be construed as default of the contractor and the Employer may take action under default clause.

FORM 3 - MANUFACTURER'S AUTHORISATION FORM

Dear Sir,

Ref: Your Tender No., dated

We, who are proven and reputed manufacturers of Mobile X-ray Container Scanner System having factories at, hereby authorise Messrs..... (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 document for the Mobile X-ray Container Scanner System manufactured by us.

We further confirm that no Supplier or firm or individual other than Messrs (name and address of the above agent) is authorised 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 offered make & model of Mobile X-ray Container Scanner System manufactured by us.

We also hereby extend our full warranty, as contained in the Tender Document, for the Mobile X-ray Container Scanner System & associated equipment/systems and Services offered for supply by the above firm against this tender.

Yours faithfully,

.....

.....

[signature with date, name and designation]

Note: This letter of authorisation should be on the letter head of the manufacturing firm and should be signed by a person competent and having the power of attorney to legally bind the manufacturer.

FORM 4- BANK GUARANTEE FORM FOR EMD

Whereas (hereinafter called the “Tenderer”) has submitted its quotation dated..... for the supply of (hereinafter called the “tender”) against the Purchaser ’s tender No., know all persons by these presents that we of (hereinafter called the “Bank”) having our registered office at are bound unto (hereinafter called the “Purchaser ”) in the sum of..... for which payment shall and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents.

Sealed with the Common Seal of the said Bank this..... day of 20.....

The conditions of this obligation are —

- (1) If the Tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender;
- (2) If the Tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:
 - a) fails or refuses to furnish the performance security for the due performance of the contract, or
 - b) fails or refuses to accept or execute the contract,

We hereby irrevocably and absolutely undertake to pay immediately the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser shall note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition(s).

This guarantee shall remain in force for a period of forty five days after the period of tender validity, i.e., up to..... and any demand in respect thereof should reach the Bank not later than the above date.

This guarantee shall not be discharged due to change in the constitution of the bank or the Tenderer.

.....
(Signature of the authorised officer of the Bank)

.....
Name and designation of the officer

.....
Seal, name & address of the Bank and address of the Branch

**FORM 5- BANK GUARANTEE FORM FOR PERFORMANCE SECURITY AND
WARRANTY PERFORMANCE**

WHEREAS (name and address of the Supplier) (herein after called “the Supplier”) has undertaken, in pursuance of contract no..... dated to supply (description of goods and services) (herein after called “the contract”).

AND WHEREAS it has been stipulated by you in the said contract that the Supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognised by you for the sum specified therein as security for compliance with its obligations in accordance with and due performance of the contract;

AND WHEREAS we have agreed to give the Supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the Supplier, up to a total of (amount of the guarantee in words and figures), and we hereby irrevocably and absolutely undertake to pay you immediately, upon your first written demand declaring the Supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

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

We agree that the provisions of Sanctions for Violation incorporated in the pre- contract integrity pact shall be applicable for forfeiture of Performance Bond in case of a decision to forfeit the same without assigning any reason for imposing sanction for violation of the Integrity Pact.

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

The Bank guarantee shall be interpreted in accordance with the laws of India.

The Guarantor Bank represents that this Bank Guarantee has been established in such form and with such content that is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

The Bank Guarantee shall not be affected in any manner by reason of merger, amalgamation,

restructuring or any other change in the constitution of the Guarantor Bank or the Supplier.

The Bank further undertakes not to revoke this Guarantee during its currency except with the previous express consent of the Purchaser in writing.

The Bank declares that it has power to issue this Guarantee and discharge the obligations contemplated herein, the undersigned is duly authorized and has full power to execute this Guarantee foran on behalf of the Bank.

This guarantee shall be valid upto and including the day of, 20.....

.....
(Signature with date of the authorised officer of the Bank)

.....
Name and designation of the officer

.....
Seal, name & address of the Bank and address of the Branch

**FORM 6 -BANK GUARANTEE PROFORMA FOR
ADVANCE PAYMENT OF CAMC CHARGES
(ON NON-JUDICIAL STAMP PAPER OF AN APPROPRIATE VALUE)**

Dear Sir,

We _____ (name & address of the Bank) hereby refer to the Comprehensive Annual maintenance Contract (hereinafter referred to as **CAMC**) dated _____ between the _____, (hereinafter to as “ _____”) in terms of the Tender No. _____ dated _____ and _____ (hereinafter referred to as “the Contractor”) providing in substance for the comprehensive annual maintenance of _____ Mobile X-ray Container Scanner System bearing serial Nos. _____, as particularized in the said CAMC.

Under the terms of the said CAMC, the Contractor is required to furnish a bank guarantee for an amount not less than the advance amount extended to him, which shall remain valid till 3 months after closure of the CAMC period.

In view of the foregoing and pursuant to the terms of the said CAMC, which is referred to and made a part thereof as full and to the same extent as if copied at length herein, we hereby irrevocably absolutely and unconditionally guarantee to the _____, due performance of all the terms and conditions of the CAMC to the extent of Rs. _____.

This guarantee shall be construed as an irrevocable, absolute, unconditional and direct guarantee of the performance of the CAMC without regard to the validity, regularity or en-forcibility of any obligation of the parties to the CAMC.

The _____ shall be entitled to enforce this guarantee without being obliged to resort initially to any other security or to any other remedy to enforce any of the obligations herein guaranteed and may pursue any or all of it remedies at one or at different times. Upon default of the CAMC, we agree to pay to the _____ on demand and without any demur the sum of Rs. or any part thereof, immediately upon presentation of a written statement by the _____ that the amount of said demand is due from the Contractor to the _____ by virtue of breach of performance by the Contractor under the terms of the aforesaid CAMC. Notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending before any Court or Tribunal relating thereto, liability under this present guarantee is absolute and unequivocal.

The determination of the amount due under the guarantee shall be in the sole discretion of the _____ whose decision shall be conclusive and binding on us as guarantor.

It is mutually agreed that the _____ shall have the fullest liberty without affecting in any manner our obligation hereunder with or without our consent to vary any of the terms of the said CAMC or to extend

the time for performance by the Contractor, from time to time any of the powers exercisable by the _____ against the Contractor and either to forebear or enforce any of the terms and conditions relating to the said CAMC and we shall not be relieved from our liability by reasons of any variation or any extension being granted to the Contractor or for any forbearance, act or omission on the part of the Purchaser or any indulgence by the Purchaser to the Contractor or by any such matter or thing whatsoever which under the law relating to the sureties would but for this provision have effect of so relieving our obligation.

This guarantee is confirmed and irrevocable and shall remain in effect until _____ and _____ such extended periods, which may be mutually agreed to. We hereby expressly waive notice of any said extension of the time for performance and alteration or change in any of the terms and conditions of the said Centralised Comprehensive Annual Maintenance Contract. This guarantee shall not be discharged due to change in constitution of the Bank or the Contractor.

We _____ (Name of the Bank) undertake not to revoke this guarantee during its currency without written consent of the authority.

This guarantee shall not be discharged due to change in the constitution of the Bank or the Supplier.

Very truly yours,

(Name, Seal & Authorised Signature of the Bank and date)

FORM 7 - MODEL CERTIFICATE OF INSTALLATION

F. No. _____

Dated _____

1. Reference Contract No. _____ Dated _____

2. It is certified that:

- a) M/s _____ have completed installation of Mobile X- ray Container Scanner on _____ [date(s)] and Site Acceptance Test (SAT) and other inspection & tests, as stipulated in the contract on _____ [date(s)] to the satisfaction of the Purchaser and user Commissionerate at the Designated Site (Name of the Site).
- b) Records of SAT and other inspection & tests are annexed to this Certificate.
- c) Sample test jigs, Software in electronic media, Instruction Manual & Technical Manual, Soft & hard copies of Documentation, etc. have been taken over (all documents required to be delivered at the time of SAT) and the same are listed in the Annexure enclosed.

For Contractor

For Purchaser

Witness:

Witness:

Signature
Name:

Signature
Name:

Designation:
Address:
Date:

Designation:
Address:
Date:

**FORM 7A-MODEL CERTIFICATE OF RECEIPT OF
MOBILE X-RAY CONTAINER SCANNER AT SITE OF INSTALLATION**

F.No. _____

Dated _____

1. Reference Contract No. date _____

2. It is certified that:

- a) Mobile X-ray Container Scanner have been received in good condition at _____ on _____, after satisfactory Factory Acceptance Test conducted at the works of M/s _____ (OEM) during _____ and supplied by _____ to the satisfaction of the Purchaser.
- b) The consignment is accompanied by all Accessories, Instruction Manuals & Technical Manuals for satisfactory installation of the Mobile X-ray Container Scanner. The list of the same is annexed herewith.

For Contractor

For Purchaser

Witness:
Signature
Name:
Designation:
Address:
Date:

Witness:
Signature
Name:
Designation:
Address:
Date:

FORM 8 - MODEL CERTIFICATE OF DELIVERY AND ACCEPTANCE

F.No. _____

Dated _____

1. Reference Contract No. _____ date _____

2. It is certified that:

- a) M/s _____ have completed the delivery of the Mobile X-ray Container Scanner Model _____ Serial No. _____ on _____ (date) at designated site (name of the site).
- b) The process of handing / taking over of the aforesaid system, accessories and services specified in the Contract to the satisfaction of the Purchaser, has been completed on _____ (date).
- c) .The aforementioned Mobile X-ray Container Scanner worked satisfactorily during the trial period of 30 days starting w.e.f. _____ (date) to _____ (date)

For Contractor

For Purchaser

Witness:
Signature
Name:
Designation:
Address:
Date:

Witness:
Signature
Name:
Designation:
Address:
Date:

FORM 9 - CLAIM OF PAYMENT BY THE SUPPLIER
(To be typed and printed on the Supplier's official letterhead)

Date.....

Sir/ Madam,

We claim the following amounts as per contract entered into pursuant to NIT

 and have enclosed necessary billing documents

S.No.	Stage	Amount and currency	Payment	Billing documents enclosed

2. We certify that:

- a) the above payments are claimed strictly in terms of the contract and all our obligations under the contract for claiming them have been fulfilled;
- b) of such taxes and duties claimed, if we get any refund from the tax authorities we shall refund the same to you.

Yours sincerely,

(.....)

FORM 10 - DECLARATION

(To be typed and printed on the Supplier's official letterhead)

Date.....

Sir/ Madam,

Ref.: Tender Enquiry Document No.....Dated.....

We hereby confirm and declare that we have not engaged and shall not engage any individual or firm, whether Indian or foreign whatsoever, to intercede, facilitate or in any way recommend to the Government of India or any of its functionaries, whether officially or unofficially for the award of contract to us, nor any amount has been paid, promised or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation.

(Signature, name and address of the Supplier's executive duly authorised to sign)

FORM 11 - INFORMATION IN RESPECT OF PREVIOUS SUPPLIES BY BIDDER

Part-I: Summary

Year/Month	No of Mobile X-ray Container Scanner Systems commissioned	Clients

Part-II: Details of each Supply mentioned in Part- I

1.0	Brief specification of Mobile X-ray Container Scanner System supplied with make & model number.	
2.0	Location where installation done	
	a) Country	
	b) Town(s)	
3.0	Address of the client	
	a) Physical Address	
	b) Telephone(s)	
	c) Fax No. & E-mail ID	
4.0	Client's key contact person(s)	
	a) Name(s)	
	b) Designation	
	c) Telephone & E-mail ID	
5.0	Project schedule	
	a) Commencement date	
	b) Completion date	
	c) Reasons for delay, if any	
6.0	Project cost	
7.0	Number of technical staff deployed by the company/ firm for the project	
8.0	Third party firm(s) involved with project	
	a) Name(s)	
	b) Roles and responsibility of the firm	
	c) Physical Address	
	d) Physical Address; Telephone, Fax No. & E-mail ID	
9.0	Scope of supply/service (equipment, building, maintenance- comprehensive or otherwise, software upgrades, long-term warranty, etc.)	
10.0	Performance certificate from the agency whom the supply has been made.	
11.0	State any challenges or problems experienced by yourselves during project implementation or do you have any suggestion to make.	

FORM 12- PRE CONTRACT INTEGRITY PACT

GENERAL

The pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on _____ day of the month of _____ 2020, between, the President of India acting through Dr./Shri/Smt. _____, Principal Commissioner, Directorate of Logistics, Central Board of Indirect Taxes & Customs, Department of Revenue, Ministry of Finance, Government of India (hereinafter called the "Purchaser", which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part and M/s _____ represented by Dr./Shri/Smt. _____, (Designation) (hereinafter called the "Tenderer" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the Purchaser proposes to procure 5 (Five) Nos. of X-ray based Mobile Container Scanner System and the Tenderer is willing to offer/has offered the stores, and

WHEREAS the Tenderer is a private company/public company/Government undertaking/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the Purchaser is a Ministry/Department of the Government of India, performing its functions on behalf of the President of India,

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:

Enabling the Purchaser to obtain the desired said stores/equipment at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling Tenderers to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the Purchaser will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

1. Commitments of Purchaser

1.1 The Purchaser undertakes that no official of the Purchaser, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the Tenderer, either for themselves or for any person, organisation or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

1.2 The Purchaser will, during the pre-contract stage, treat all Tenderers alike, and will provide to all Tenderers the same information and will not provide any such information to any particular Tenderer which

could afford an advantage to that particular Tenderer in comparison to other Tenderers.

1.3 All the officials of the Purchaser will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case any such preceding misconduct on the part of such official(s) is reported by the Tender to the Purchaser with full and verifiable facts and the same is prima facie found to be correct by the Purchaser, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Purchaser and such a person shall be debarred from further dealing related to the contract process. In such a case while an enquiry is being conducted by the Purchaser the proceedings under the contract would not be stalled.

3. Commitments of Tenderers

3.1 The Tenderer commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following: -

3.2 The Tenderer will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Purchaser, connected directly or indirectly with the bidding process, or to any person, organisation or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

3.3 The Tenderer further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Purchaser or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Government.

3.4 Foreign Tenderers shall disclose the name and address of agents and representatives and Indian Tenderers shall disclose their foreign principals or associates.

3.5 Tenderers shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/ contract.

3.6 The Tenderer further confirms and declares to the Purchaser that the Purchaser is the original manufacturer/integrator/authorised government sponsored export entity of the defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Purchaser or any of its functionaries, whether officially or unofficially to the award of the contract to the Tenderer, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

3.7 The Tenderer, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the Purchaser or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

3.8 The Tenderer will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

3.9 The Tenderer will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

3.10 The Tenderer shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the Purchaser as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Tenderer also undertakes to exercise due and adequate care lest any such information is divulged.

3.11 The Tenderer commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

3.12 The Tenderer shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

3.13 If the Tenderer or any employee of the Tenderer or any person acting on behalf of the Tenderer, either directly or indirectly, is a relative of any of the officers of the Purchaser, or alternatively, if any relative of an officer of the Purchaser has financial interest/stake in the Tenderer's firm, the same shall be disclosed by the Tenderer at the time of filling of tender. The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.

3.14 The Tenderer shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Purchaser.

4. Previous Transgression

4.1 The Tenderer declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify Tenderer's exclusion from the tender process.

4.2 The Tenderer agrees that if it makes incorrect statement on this subject, Tenderer can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

5. Earnest Money (Security Deposit)

5.1 While submitting the bid, the Tenderer shall deposit an amount mentioned in clause 1.31, Global Notice Inviting e-Tender (GNIT) as Earnest Money/Security Deposit, with the Purchaser in the form of Bank Guarantee as per proforma given in tender document.

5.2 The Earnest Money/Security Deposit shall be valid up to a period of 45 days beyond the validity period of the tender.

5.3 In case of the successful Tenderer a clause would also be incorporated in the Article pertaining to Performance Bond in the Purchase Contract that the provisions of Sanctions for Violation shall be applicable for forfeiture of Performance Bond in case of a decision by the Tenderer to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

5.4 No interest shall be payable by the Purchaser to the Tenderer on Earnest Money/Security Deposit for the period of its currency.

6. Sanctions for Violations

6.1 Any breach of the aforesaid provisions by the Tenderer or any one employed by it or acting on its behalf (whether with or without the knowledge of the Tenderer) shall entitle the Purchaser to take all or any one of the following actions, wherever required: -

- I. To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the Tenderer. However, the proceedings with the other Tenderer(s) would continue.
- II. The Earnest Money Deposit (in pre-contract stage) and /or Security Deposit/Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the Purchaser and
- III. To immediately cancel the contract, if already signed, without giving any compensation to the Tenderer.
- IV. To recover all sums already paid by the Purchaser, and in case of an Indian Tenderer with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a Tenderer from a country other than India with interest thereon at 2% higher than the LIBOR (Landon Inter Bank Official Exchange Rate). If any outstanding payment is due to the Tenderer from the Purchaser in connection with any other contract for any other stores, such outstanding payment could also be utilised to recover the aforesaid sum and interest.
- V. To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the Tenderer, in order to recover the payments, already made by the Purchaser, along with interest.
- VI. To cancel all or any other Contracts with the Tenderer. The Tenderer shall be liable to pay compensation for any loss or damage to the Purchaser resulting from such cancellation/rescission and the Purchaser shall be entitled to deduct the amount so payable from the money (s) due to the Tenderer.
- VII. To debar the Tenderer from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the Purchaser.
- VIII. To recover all sums paid in violation of this Pact by Tenderer(s) to any middleman or agent or broker with a view to securing the contract.
- IX. In cases where irrevocable Letters of credit have been received in respect of any contract signed by the Purchaser with the Tenderer, the same shall not be opened.
- X. Forfeiture of Performance Bond in case of a decision by the Purchaser to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.2 The Purchaser will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (x) of this Pact also on the Commission by the Tenderer or any one employed by it or acting on its behalf (whether with or without the knowledge of the Tenderer), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the Purchaser to the effect that a breach of the provisions of this Pact has been committed by the Tenderer shall be final and conclusive on the Tenderer. However, the Tenderer can approach the Independent Monitor(s) appointed for the purpose of this Pact.

7. Fall Clause

7.1 The Tenderer undertakes that it has not supplied/is not supplying similar product/systems or sub

systems at a price lower than that offered in the present bid in respect of any other Ministry/department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the Tenderer to any Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the Tenderer to the Purchaser, if the contract has already been concluded.

8. Independent Monitors

8.1 The Purchaser has appointed Shri Najib Shah, IRS (Retd.), 32, Prestige Mayberry, Nagondanahalli Main Road, Off Whitefield main Road, Whitefield, Bengaluru-560066 (Karnataka) Mobile No. 9311706358 as Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission.

8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

8.3 The monitor shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

8.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

8.5 As soon as the Monitor notices, or has reason to believe, a violation of this pact, he will so inform the Authority designated by the Purchaser.

8.6 The Tenderer(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Purchaser including that provided by the Tenderer. The Tenderer will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the Tenderer/Subcontractor(s) with confidentiality.

8.7 The Purchaser will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

8.8 The Monitor will submit a written report to the designated Authority of Purchaser/ Secretary in the Department within 8 to 10 weeks from the date of reference or intimation to him by the Purchaser/Tenderer and, should the occasion arise, submit proposals for correcting problematic situations.

9. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of commission, the Purchaser or its agencies shall be entitled to examine all the documents including the Books of Accounts of the Tenderer and the Tenderer shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

10. Law and Place of jurisdiction

The Pact is subject to Indian law. The place of performance and jurisdiction is the seat of the Purchaser.

11. Other Legal Actions

The actions stipulated in this Integrity pact are without prejudice to any other legal action that may

follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

12. Validity

12.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 5 years or the complete execution of the contract to the satisfaction of both Purchaser and the Tenderer, including warranty period, whichever is later. In case Tenderer is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

12.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The parties hereby sign this Integrity Pact at _____ on _____

Purchasing Organization

(Acting on behalf of Purchaser)

Name of the Officer

Designation

Deptt./Ministry

Witness:

1. _____

Tenderer

Designation of person signing
on behalf of Company

Witness:

1. _____

FORM 13-UNFORESEEN ALTERATIONS/ ADDITIONS

Schedule of Quantities and Rates

SN	Description	Quantity	Rate(in fingers and words)	Unit	Amount
	Any item of work altered /added in civil and PH works after finalisation of work order, which may be required during execution, based on Delhi Schedule of Rates 2019 of CPWD (or as amended)	As required	@_% (_) * above/below/at par rates Delhi Schedule of Rates 2019 of CPWD	Rs	

*Strikeout whichever is not applicable

Note: Additional costs/ reduction of charges(if any) in any item, ordered in writing during construction will be derived by calculating the difference of rates of old and new items based on the above quoted percentage.

APPENDICES

INSTRUCTIONS FOR ONLINE BID SUBMISSION

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (URL: <http://eprocure.gov.in>). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “Click here to Enroll” on the CPP Portal is free of charge.
- 2) As part of the enrolment process, the bidders shall be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders shall be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC’s to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This shall lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues. Any delay in on-line submission of the bid on account of technical fault of e-procurement site/ system will not be taken cognizance of, if bid is not submitted within due date and time.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original EMD should be submitted to the office of Tender Inviting Authority by specified date and time. The details of the EMD physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 5) A standard price bid schedule format has been provided with the tender document to be filled by all the bidders. If the price bid file is found to be modified by the bidder, the bid will be rejected.
- 6) The serve time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

- 7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.
- 8) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 9) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 10) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is **0120-4200462, 0120-4001002** or Email to cphp-support@nic.in

PARAMETRIC TESTS & INSPECTIONS FOR ACCEPTANCE

<i>Sl. No.</i>	<i>Requirements/ Checks to be carried-out for compliance of Contract Tech. Specs.</i>	<i>Compliance / Acceptance Criteria</i>	
		<i>FAT Stage</i>	<i>SAT Stage</i>
1.	<i>Mode of operation</i>		
1.1	Scanner Facility to fit into the available area, including the exclusion zone, supervisors' office, maintenance shed, etc.	Documentation+ Drawings	Documentation + Drawings
1.2	Object to be scanned: Standard containers (20 ft. or 40 ft.) used in international trade loaded on to truck-trailers (approx. size of the conveyance: 2.80 m Width, 4.60 m Height, 17.00 m Length).	Documentation+ Demonstration	Demonstration+ Documentation
1.3	Scan to cover the object from a height of 0.3 - 04 meters above the ground to the top of the container without any corner cut-off.	Documentation+ Demonstration	Demonstration+ Documentation
1.4	Mobile X-ray Container Scanner (MXCS) to operate in drive-by mode for a lineup of 4 – 6 containers loaded on to truck-trailers.	Operating procedure+ Demonstration	Demonstration+ Documentation
2.	<i>Environmental condition</i>		
2.1	System to operate under temperature (0° to +50 ⁰ C), humidity (0 to 100%); saline environment of seaport and driving rain (50-100 mm per hour) with wind speed upto 100 kmph under intense solar radiation.	Specifications+ Documentation	Documentation
2.2	Components of the Systems to be corrosion protected and fully tropicalized. Materials which promote mould growth not to be used.	Specifications+ Documentation	Documentation
2.3	Scanner components to be compatible for storage between (-) 10 ⁰ C to (+) 50 ⁰ C, when scanner is in idle condition.	Preservation process+ Documentation	Documentation
3.	<i>Climate control</i>		
3.1	System to have an automatic climate control system installed that maintains the temperature in the span of (+) 18°C to (+) 26°C and suitable for the comfort of 5 persons.	Specification+ Demonstration	Demonstration+ Documentation
3.2	Adequate climate control system, with back up, shall be provided to keep the critical equipment. Only non-CFC refrigerant to be used.	Specification+ Demonstration	Demonstration+ Documentation
3.3	Carbon Monoxide (CO) detector, with visual and audio alarms, to be provided.	Specification+ Demonstration	Demonstration+ Documentation
4.	<i>System design</i>		
4.1	System to be designed and manufactured as per the stipulations of international standards for cargo container/ vehicle scanner equipment and is an approved design and product concerning ionizing radiation in the country of manufacture.	Specification+ Documentation	Specification+ Documentation
4.2	System to be designed and constructed for continuous and reliable operation and to have guaranteed service life up to a minimum of fifteen years	Specification+ Documentation	Specification+ Documentation
4.3	System to be relocate and hence to be in modular design/ construction.	Documentation+ Demonstration	Documentation+ Demonstration
4.4	Mechanical & electrical units, sub-assemblies and components of the same type in each System to be interchangeable.	Documentation+ Demonstration	Documentation+ Demonstration

4.5	Scanner system to operate 24 x 7 x 365 on basis. Minimum availability of the scanner system should be 95% of time in a year.	Specification+ Documentation	Specification+ Documentation
4.6	Ready accessibility of units, sub-assemblies, components, controls etc. and adequate test points/ facilities for maintenance purposes to be provided.	Documentation+ Demonstration	Documentation+ Demonstration
4.7	Scanning process, meeting specifications, to provide minimum throughput of 20 vehicles/hour at normal scan speed (This should include check-in, weigh-in, scanning, image analysis and check-out).	Scanning procedure+ Demonstration	Scanning process+ Demonstration
4.8	System to be up ready with 30 minutes from stand still to beginning (with all performance parameters in compliance with the specifications) of first scan. Maximum time from termination of operations to a road worthy configuration to be 30 minutes or less.	Procedure + Demonstration	Procedure + Demonstration
4.9	System to be self-shielded, and not requiring any additional shielding wall(s), with respect to protection against radiation from the Scanner (including scatter and sky shine).	Shielding calculation+ Demonstration	Demonstration
4.10	System to be self-powered without depending on power from site. Provision to use standard shore power for maintenance/ servicing to be made. Manual back-up system to be available for stowing the boom in case of a total power failure.	Demonstration	Demonstration
4.11	Adjustable flood lights powered by the generator to be available at the high level of the rear body and / or driver cab to illuminate 2 m distance around the System at min. 150 lux during operation.	Specifications+ Demonstration	Demonstration
4.12	System to have redundancy provisions to avoid potential single point of failure from end-to-end process. Redundant provisions to be in hot stand-by mode.	Specification+ Demonstration	Demonstration
4.13	System to have built-in self-test and fault-diagnostic capability/feature.	Specification+ Demonstration	Demonstration
4.14	System to be equipped with by automatic shutdown device(s) in the case of emergency of any kind. A number of manual reset pushbutton type Emergency Stop buttons (IP65 rating) to immediately stop the X-ray generation to be available for operation's crew.	Specification+ Demonstration	Demonstration
4.15	Wireless emergency stops (for ground crew) and maintenance purpose emergency stops to be provided.	Specification+ Demonstration	Demonstration
4.16	Weatherproof (IP65) power inlet socket to be provided to allow the external mains supply. A flexible cable with length of at least 50 m, together with associated safety mechanism, to be provided for connection of the System with the external AC mains supply.	Specification+ Demonstration	Documentation+ Demonstration
4.17	Change over switch of adequate load capacity, to avoid overloading, to be provided. Residual current devices to be installed together with the changeover switch for leakage protection. Suitably sized earthing terminal and cable to be provided.	Specification+ Demonstration	Documentation+ Demonstration
4.18	System to have provisions in terms of all controls for bi-directional (i.e. forward & reverse scanning) at different scan speeds.	Documentation+ Demonstration	Documentation+ Demonstration
4.19	System to have a programmable, pre-set speed controls (user-selected speed) to maintain constant speed and synchronise it with the X-ray system during scanning of the containers to generate undistorted scanned images.	Specification+ Documentation+ Demonstration	Documentation+ Demonstration
4.20	At normal road gradient, the linearity of the drive to be	Documentation+	Documentation+

	such that there is no more than 5% linearity error in the image display.	Demonstration	Demonstration
5.	<i>System performance (at the specified speed and at different test locations in the containers) – refer Para 4.41</i>	Test procedure+ Test jig/device + Documentation+ Digital data+ Demonstration	Test procedure+ Test jigs/ device + Digital data+ Demonstration+ Documentation
	a) Penetration		
	b) Wire detect ability in free air		
	c) Contrast sensitivity		
	d) Spatial resolution		
	e) Material discrimination		
	f) Threat detection		
	g) Density threshold alert		
	h) Release/Hold decision		
	i) Image quality & storage		
6.	<i>Integrated System Performance (at the various specified speed and different test locations in the containers) Para – refer 4.41</i>	Demonstration+ Documentation+ Digital data	Demonstration + Documentation + Digital data
7.	<i>Image Quality Data (at the specified speed)</i>		
7.1	Varying steel plate thickness of 280 mm to 310 mm and behind 25 mm lead brick of size 100*100mm in steps of 10 mm located at the floor, center and top of container levels.	Demonstration+ Digital data+ Documentation	Demonstration + Digital data+ Documentation
7.2	Wire detect ability in free air, preferably for 4, 6, 8,10,12,14 & 16 AWGs preferably in horizontal and vertical planes of length 300 mm.	Demonstration+ Digital data+ Documentation	Demonstration + Digital data+ Documentation
7.3	Contrast sensitivity: (a) steel plates of thickness varying from 2 mm, 3 mm, 4 mm, 5mm & 6 mm behind 100 mm, 200 mm & 300 mm thick steel plates; (b) steel wires of length 250 mm, dia varying from 2 mm, 3 mm, 4 mm, 5mm & 6 mm behind 100 mm, 200 mm & 300 mm thick steel plates.	Demonstration+ Digital data+ Documentation	Demonstration + Digital data+ Documentation
7.4	Spatial resolution at the middle of the container with slotted jig in different spacing (4mm to 8 mm) with metal and plastic materials	Demonstration+ Digital data+ Documentation	Demonstration + Digital data+ Documentation
7.5	Material distinguishing capability for: low-Z organic, low-Z inorganic, high-Z inorganic, very high-Z inorganic, and intermediate materials in different colours, using various materials of varying thicknesses.	Demonstration+ Digital data+ Documentation	Demonstration + Digital data+ Documentation
7.6	Test rigs/jigs and instruments for evaluating the performance of the Scanner & its associated systems to have calibration certificates to be conforming to national/ international standards.	Verification+ Calibration Certificates	Verification+ Calibration Certificates
7.7	One set of test jigs/ devices/ instruments to be given to each site of System installation.	Verification+ Demonstration	Verification+ Demonstration
8.	<i>Energy source</i>		
8.1	X-ray based linear particle accelerator (LINAC) from a manufacturer of repute.	Specifications + Verification	Specifications + Verification
8.2	Components such as collimator, temperature control unit, modulator, etc. to be provided	Specifications + Verification	Specifications + Verification
9.	<i>Detection system</i>		
9.1	Requirements specified under Para 4.48 through 4.58 to be provided for.	Specifications + Verification+ Demonstration	Specifications + Verification+ Demonstration
10.	<i>Vehicle requirements & performance</i>		
10.1	Requirements specified under Para 4.59 & 4.60 to be	Specifications +	Specifications +

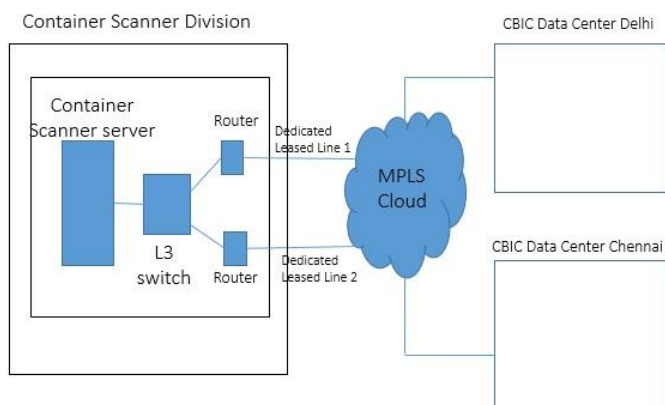
	provided for.	Verification+	Verification+
		Demonstration	Demonstration
11.	Image processing software		
11.1	Requirements specified under Para 4.61 through 4.63 to be provided for.	Specifications + Verification+ Demonstration	Specifications + Verification+ Demonstration
12.	Data /Image processing hardware		
12.1	Requirements specified under Para 4.64 to be provided for.	Specifications + Verification+ Demonstration	Specifications + Verification+ Demonstration
13.	Networking		
13.1	Requirements as specified under Para 4.65 through 4.70 to be provided for.	Specifications + Verification+ Demonstration	Specifications + Verification+ Demonstration
14.	Data management, storage, back-up/recovery		
14.1	Requirements as specified under Para 4.71 through 4.74 to be provided for.	Specifications + Verification+ Demonstration	Specifications + Verification+ Demonstration
15.	Cargo viewing		
	Requirements as specified under Para 4.75 through 4.78 to be provided for.	Specifications + Verification+ Demonstration	Specifications + Verification+ Demonstration
16.	Software & software upgrade		
	Requirements as specified under Para 4.79 through 4.81 to be provided for.	Specifications + Verification+ Demonstration	Specifications + Verification+ Demonstration
17.	Radiological & regulatory requirements		
17.1	Scanner system should be suitably shielded for protection from radiation by the scanner as per the requirement of AERB.	Documentation+ Drawings + Demonstration	Documentation + Drawings + Measurement
17.1	Radiation dose at the exclusion zone boundary shall not exceed the limit prescribed by AERB for a line-up of 4-6 containers.	Estimation+ Demonstration + Documentation	Documentation + Drawings + Measurement
17.3	Scanning operation should be safe for food, vegetables, pharmaceuticals, chemicals, active medical supplies, electronic data media, or other commonly traded goods.	Documentation+ Demonstration	Demonstration + Documentation
17.4	Radiation monitoring & alarm system comprising ion chamber radiation detectors, audible and visual alarms and connection to the X-ray System for emergency shut off to be provided.	Specification+ Demonstration+ Documentation	Specification+ Demonstration+ Documentation
17.5	Audible or visual alarm to trigger if the measured radiation dose exceeds a pre-set level programmed by the operators. Dosimeter to trip the X-ray System when it detects alarm-level dosage has exceeded the limits and requires manual reset before the System can resume operation.	Specification+ Demonstration+ Documentation	Specification+ Demonstration+ Documentation
17.6	Dose on cargo per Scanning not to exceed 50 µSv (5 mR) measured at the center of testing position.	Calculation+ Demonstration	Demonstration+ Documentation
17.7	Supply of 3 three sets radiation survey meters of requisite specifications (per site of installation) and calibrated for ambient dose equivalent.	Specifications + Certification+ Functional check	Specifications + Certification+ Functional check
17.8	Supply of personnel digital dosimeters (6 Nos.) of requisite specifications per site of installation.	Specifications + Certification+ Functional check	Specifications + Certification+ Functional check
17.9	Statutory provisions on safety as specified Roadway authorities.	Specification + Demonstration	Demonstration+ Documentation
17.10	Statutory provisions for safe operation of	Specification +	Demonstration+

	electrical sub-station and electrical systems.	Demonstration	Documentation
17.11	Statutory provisions for fire safety of the scanner facility.	Specification + Demonstration	Demonstration+ Documentation
18.	<i>Security, surveillance & communication</i>		
18.1	Requirements specified under Para 4.87 through 4.90 to be provided.	Specifications + Drawings + Demonstration+ Snapshot recording	Specifications+ Drawings + Demonstration + Snapshot recording
19.	<i>Weigh bridge</i>		
19.1	Functioning of weigh bridge of approved specifications.	Specifications + Demonstration	Documentation + Demonstration
19.2	Integration of measured weight of container with its image obtain during scanning operation.	Demonstration+ Documentation	Documentation + Demonstration
20.	<i>UPS & Battery back-up</i>		
20.1	Functioning of UPS of approved rating and specifications with due certification.	Specifications + Demonstration	Documentation + Demonstration
20.2	Functioning of battery bank of approved rating and specifications with due certification.	Specifications + Demonstration	Documentation + Demonstration
21.	<i>Civil / Structural Works</i>		
21.1	Review of layout and specifications.		Submissions
21.2	Inspection of all areas for dimensions, finishes, fitments & fixtures, etc. as per the contract requirements and as-built drawings.		Verification + Documentation
21.3	Checking installation and functioning of fire detection, mitigation and fighting system as per specifications and as-built drawings.		Specification+ Verification + Documentation
22.	<i>Electrical, AC & Communication Works</i>		
22.1	Review of layouts, specifications, documents, drawings, etc.		Submissions + Documentation
22.2	Installation checks for all equipment, components, fittings & fixtures, etc.		Verification + Documentation
23.3	Operation of boom barriers, pumps, and other motorised items as per operational scheme.	Specifications+ Documentation	Demonstration + Documentation
23.4	Supply, installation, testing & commissioning of climate control (i.e. air-conditioning, heating and ventilation) systems meeting functional requirements and as per specification.	Design calculation + Specifications+ Demonstration+ Documentation	Design calculation+ Specifications+ Demonstration + Documentation
23.5	Supply, installation, testing & commissioning of fuel oil storage & transfer system, as per specification.	Design calculation+ Specifications+ Documentation	Specifications + Demonstration + Documentation
24.	<i>Regulatory Approvals & other Statutory Clearances</i>		
24.1	AERB inspection of installed Scanner System.		Submissions + Documentation
24.2	Authorization of AERB for regular operation of the Scanner System Facility from AERB.		Submissions + Documentation
25.	<i>Training</i>		
25.1	Fulfilment as per Contract Document		Training module review
26.	<i>Warranty Maintenance</i>		
26.1	Fulfilment as per Contract Document		
27.	<i>Post-warranty Maintenance</i>		
27.1	Fulfilment as per Contract Document		

Schematic Layout of Mobile X – Ray Container Scanner Facility

Plot Plan for Mobile X – Ray Container Scanner Facility

Container Scanner Connectivity Configuration



Requirements to be satisfied by Vendor

1. Installation and configuration of the Container Scanner machines by the identified vendors.
2. Provisioning of Desktops/ PC for connecting with the Container Scanner machines.
3. Procurement of server hardware and associated software like Operating system licenses, application software etc. for Container Scanner server at each location. It includes application to view & analyse the images should be provided. The application should enable access of images through LAN for multiple users simultaneously remotely for viewing & exercise basic functionalities such as zoom, move etc.
4. Installation, Configuration and maintenance of the Container Scanner server at the identified Customs locations. This local server should be capable of storing the images in live environment as specified in tender document and also capable of storing in archives for later retrieval.
5. Securing access to the Container Scanner servers by hardening to allow access to authorized users only.
6. Compatible for configuration of a different VLAN (Vendor VLAN) for the Container Scanner vendor.
7. Changes required at the local network and Vendor's LAN at the Customs site for integration and access of the Container Scanner server by the Customs officers.
8. Dedicated Leased Line connectivity of adequate band width (16 Mbps or more) with redundancy which would link the Customs location where the Container Scanner server shall be hosted with the CBIC's Primary Data Centre in New Delhi & Chennai.
9. Installation, configuration and maintenance of hardware and software necessary for Scheduling of the data/image transfer from the local Container Scanner Servers to CBIC's Data Centres using SFTP/MFTP/GRE TUNNEL at agreed frequency.
10. A L3 manageable switch which supports GRE Tunnel is to be provided by the vendor for establishing connectivity to CBIC Data Centres.