

TENDER FORM

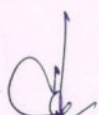
Price : Rs. 9900.00 NO.
Date of Opening of Tender : 22-10-2016

UTTAR PRADESH GOVERNMENT RAILWAY POLICE HEADQUARTERS
Indira Bhawan, 5th Floor Ashok Marg
LUCKNOW

CONTENTS:-

1. GENERAL GUIDELINES FOR TENDER
- 2a. CONDITIONS OF AGREEMENT
- 2b. निविदा की शर्तें
3. TECHNICAL OFFER
4. FINANCIAL OFFER
5. CHECK LIST FOR SUBMITTING OFFERS
6. REQUEST FOR PROPOSAL(RFP)

Total pages = 48



1. GUIDELINES TO FILL TENDER FORMS

1. All the enclosures should be valid on the date of opening of the tender.
2. All the certificates/documents mentioned in the tender notice/tender form or details of which are attached with the tender form must be submitted by the tenderers should be valid and up-to-date.
3. In case of U.P. state firm, enclose valid trade tax/VAT, registration certificate and trade tax/VAT clearance certificate. The clearance certificate should not have been issued earlier than 364 days of the date of opening of tender. In case of outside U.P. firms enclose valid C.S.T./VAT registration certificate.
4. Copy of the tender fee deposited (Tender fee can be deposited either in cash or in the form of IPO/Demand Draft in favour of IG Railway, Lucknow, U.P. GRP Hqrs., Lucknow.)
5. Firms will have to provide an affidavit on non-judicial stamp paper worth Rs. 100/- that their firm/Company has no criminal back ground and they are not involved in any criminal activity.
6. Firms will have to provide an affidavit on non-judicial stamp paper worth Rs. 100/- regarding that their firm and the equipments which they are offering are not black listed by any department/authority.
7. The essential details of specifications & instructions are to be followed strictly in accordance with the tender notice. The tendering firms are required to submit their offer in two PARTS. The first part will be named as TECHNICAL OFFER & the second part will be called as FINANCIAL OFFER. THE TECHNICAL OFFER AS WELL AS FINANCIAL OFFER ARE TO BE PREPARED IN DUPLICATE SEPARATELY. (i.e. in separate covers i.e. Total Four Envelopes clearly indicating ORIGINAL & DUPLICATE on envelopes). Indicating very clearly on all the envelopes all the relevant details. Details are given as under:-

BOTH TECHNICAL OFFER & FINANCIAL OFFER, IN DUPLICATE, BE KEPT SEPARATELY IN FOUR SEALED AND SEPARATE COVERS. THESE FOUR COVERS, INDICATING ORIGINAL/DUPLICATE OFFER AND OTHER RELEVANT DETAILS ON FRONT, MUST BE KEPT IN ONE COVERING ENVELOPE (I.E. IN FIFTH ENVELOPE) & IT SHOULD BE DULY SEALED AND PROPERLY ADDRESSED. IN TECHNICAL OFFER & FINANCIAL OFFER/BID COVERS, FOLLOWING MUST BE SPECIFICALLY INDICATED ON THE COVERING ENVELOPE -THE TENDER NOTICE NO. -----
----- DATED ----- DUE/OPENING ON -----, PLEASE NOTE THAT SINGLE OFFER IN ANY OF THE COVERS I.E. TECHNICAL OR FINANCIAL OFFERS OR RATE QUOTED IN TECHNICAL OFFER WILL NOT BE ACCEPTED.

8. Rates and other taxes such as Excise, VAT/Trade tax and levies etc. should be recorded separately and very clearly. Any cutting/corrections, if any shall be properly attested by the tenderer.
9. After opening of the tender any change in the rates shall not be acceptable and offer will summarily be rejected.
10. In case, any required document(s)/paper(s) is short at the time of submission of tender, the tenderer, may give the reasons of non-submission of papers in their technical offer. Decision of PC (purchase committee) will be final in this regard.
11. Tenderer (Authorized person) shall sign the offer and all the enclosures being submitted by them with their designation, seal and date.
12. Mention full technical details of your items specifications-wise as desired in the tender notice.
13. Mention if there is any deviation in your offer in comparison to that of desired specifications.
14. No representation shall be entertained after opening of financial cover of tender.
15. Tenderers will quote their rates according to proforma mentioned in the financial offer i.e. rates, Trade tax, Excise duty extra etc. separately, failing which offer may be rejected/ignored.
16. Financial offer in two copies should be duly signed by the authorized signatory.

17. Details of the rate being quoted/giving Trade tax, excise duty, other taxes etc. separately and net rate including packing, forwarding and other expenditure if any.
 18. Quoting any conditional discount which affects the quoted rates shall not be acceptable and such offer shall be rejected out rightly. Any discount given on quoted price as a whole shall however be acceptable.
 19. Financial offer should be in duplicate along with enclosure and single copy of offer shall not be accepted and will be rejected out rightly.
 20. If the rates in financial bid are typed then it should be with the same typewriter by which other details are typed in Financial Bid.
 21. If the rates in Financial Bid are typed with other typewriter then it should be signed by the same person who has signed Financial Bid.
 22. If the rates are written by pen then it should be signed by the same person who has signed Financial Bid.
 23. Any cutting or overwriting in Financial bid should be signed by the same person who has signed Financial Bid.
 24. In Technical offer, Index should be made with page number clearly mentioned on every page.
-



2a. CONDITIONS OF AGREEMENT

1. The arrangement is to last till but in the event of any breach of the terms of arrangement at any time on the part of the supplier the arrangement shall be determined summarily by the Inspector General of Police (Rlys.) Lucknow without compensation to the supplier.
2. The supplier will supply goods and materials from time to time in such quantities as may be entered in the indents sent at the rates set forth in the Schedule of rates at page 12.
3. The goods or materials to be supplied under the arrangements are to be of the quality or sort in every respect equal and answerable to the patterns or sample sent with the quotations and approved by the purchase committee headed by Inspector General of Police (Rlys.) Lucknow. In the event of supplies not being up to the sealed sample accepted, but good enough for retention, the goods supplied may either be retained at a reduction in cost not exceeding 10 per cent of the total value or be returned to the supplier in accordance with paragraph 10 below at the option of the Indenting Officer. The goods may only be retained at a reduction if the supplier agrees.
4. The Inspector General of Police (Rlys.) Lucknow may, by notice in writing, call upon the supplier to supply additional goods or materials to serve as samples, and upon such notice in writing the supplier shall be bound to supply additional samples of goods or materials, such additional samples being in all respects of same quality or sort as the sample first supplies.
5. (a) All rates are to be based on delivery, securely packed and for stations nearest to suppliers or Indenting Officers as asked for in the tender notice.
(b) Railway freights, if pre-paid, shall be added to the original quotations.
(c) When goods are ordered for the station nearest to supplier, the Indenting Officer may at his option direct that this shall be booked either by goods train or by passenger train and either at owner's risk or at railway risk. The supplier shall carry out his direction and shall, in any case, be responsible for the safe delivery of the goods soundly and securely packed to the Railway Administration and shall obtain from such Railway Administration a clear receipt for the goods in evidence thereof. In the absence of a clear receipt, the suppliers will be held responsible for all damages or loss caused by breakage or leakage which may occur to the goods while in transit and until they have been delivered to the consignee at railway station of destination.
(d) When goods are ordered for station of destination, the suppliers shall be required to bear all risks of loss, leakage or damage, and shall deliver the goods in good order to the consignee at railway station of destination, mentioned in the indent, in such quantities or number and with in such time and in such manner as the Indenting Officer shall, from time to time, direct.
6. Unless when specially ordered in the order accompanying the indent, all goods must be dispatched within 14 days of the receipt of indent by the supplier.
7. With every dispatch of goods or materials under the arrangement invoices or bills of parcels in duplicate are to be sent by the supplier to the Indenting Officer, the duplicate to be returned by the Indenting Officer with the quantities or number received duly noted thereon.
8. Conditions as to time for performance whether laid down herein or in the indent shall be always regarded as the essence of the arrangement.
9. The Inspector General of Police (Rlys.) Lucknow or any of the experts attached to the Govt. Railway Police or the Indenting Officer or any other officer or person duly authorized in writing by Add.-Director General of Police (Rlys) U.P. Lucknow shall have power to inspect the

stores before, during and after manufacture, collection, dispatch, according to the sample or specification in weights, quantity and number.

10. Goods or materials rejected or refused on the ground of inferior quality or any other ground shall be removed by the supplier at his own risk and expense within ten days after notice has been received by him of such rejection. In the event of non-removal by the supplier of the aforesaid within the said period of ten days, it shall be lawful for the Inspector General of Police (Rlys.) Lucknow to authorize the Indenting Officer to sell by public auction any rejected materials or goods and in such cases the supplier shall be credited with the sale proceeds thereof but will not be entitled to any loss of damage that may be occasioned by such sale. If the contractor is not satisfied with the decision of the authority rejecting or refusing goods, he may appeal to the Inspector General of Police (Rlys.) Lucknow within five days of the receipts of such notice, and the decision of the Inspector General of Police (Rlys.) Lucknow will be final in all cases.

11. The system of payment shall be as follows:

- Bill in four copies shall be sent by the supplier to the Indenting Officer and on receipt of these, the Indenting Officer or his superior officer shall make payment direct. The suppliers may, however, for their own convenience send advance intimations for the amount of the bill to the indenting officer but no advance payment shall be made.
- Payment shall ordinarily be made within one month of delivery and successful acceptance test procedure. All payment shall be subject to the deduction of any amount to which the supplier may be or render himself liable under the terms of this arrangement.

12. Packing cases, containers, gunny packages, etc. which may be used for purposes of packing and which are delivered with stores will be not returned or paid for, unless specially stipulated.

13. The contractor shall not sub-let or assign this contract without the written permission of the Inspector General of Police (Rlys.) Lucknow. In the event of the contractor sub-letting or assigning this contract without such permission he shall be considered as having thereby committed a breach of this contract.

14. In the event of the suppliers not being in strict accordance with these conditions or not being delivered within the time allowed, the Inspector General of Police (Rlys.) Lucknow, may recover from the contractor as liquidated damages and not by way of penalty the sum of one percent of the value of the said goods or materials for each and every day up to 25 days during which the articles to be supplied are not delivered or bad articles are not replaced. Further, it shall be lawful for the Inspector General of Police (Rlys.) Lucknow or the Indenting Officer to purchase the required articles or any suitable quality obtainable in the open market at the risk and cost of the contractor, who in addition to the liquidated damages aforesaid shall be liable for any loss or damages caused by the said purchase. The Inspector General of Police (Rlys.) Lucknow shall alone be entitled to adjudge upon the penalty or compensation or damages due for delay in performance, as also to adjudge upon the advisability of taking other suitable action. If the delay shall have arisen from any cause which the Inspector General of Police (Rlys.) Lucknow may declare in writing to be a reasonable, such additional time may be allowed as may be considered necessary in the circumstances of the case. In such a case he may also forego the whole or any part of the aforesaid liquidated damages but not the other loss or losses.

15. In case of non-performance in any form or shape of the conditions of this arrangement the Inspector General of Police (Rlys.) Lucknow shall have power to annul, rescind or cancel the arrangement and upon his notifying in writing to the supplier that he has so done, this arrangement shall absolutely determine. He may also debar the firm for the Uttar Pradesh police Department contracts for such periods as he thinks fit.

16. In the event of any dispute arising out of or concerning this Agreement (except as to any matters the decision of which is specifically provided for this Agreement), the same shall be

referred to the arbitration of an arbitrator nominated by Inspector General of Police (Rlys.) Lucknow and an arbitrator nominated by the contractor, or in the case of the contractor Inspector General of Police (Rlys.) Lucknow failing to nominate an arbitrator within the time fixed in the notice to be served on him by the said Inspector General of Police (Rlys.) Lucknow the contractor, or the contractor, as the case may be, by the arbitrator, nominated by the Inspector General of Police (Rlys.) Lucknow and the contractor or in case of disagreement between the said arbitrators to an umpire appointed by them and the decision of such arbitrators or arbitrator or umpire as the case may be, shall be final and binding on the parties. The arbitrators/arbitrator/umpire may from time to time with the consent of the parties enlarge the time for making and publishing the award.

17. Without prejudice to any other remedy provided by law any amount due from the supplier to the Governor will be recoverable as arrears of land revenue and may also be recovered by deductions from any amount due from the Governor to the supplier on any account under any other transaction.

18. The supplier will send to the Deputy Director of Industries (Stores), Uttar Pradesh Kanpur, quarterly statement of goods they supply under this arrangement in the following form;

Name of (whether Officer or foreign)	Indent No. and date	Name of article	Quantity or number	Value of applies	Remarks Indian make
			supplied		

OTHER CONDITIONS

19. It shall be the responsibility of the tendering firms to present themselves on the date of Technical & Financial bid opening and meeting thereof and acquaint themselves with the shortcomings. No separate intimation will be sent to them in this regard.

20. If any regulatory act is applicable in item, then enclose copy of clearance of the competent authority.

21. Give any other special information if asked for.

22. If OEM doesn't have its service centre in India, then it's dealer/distributor must have service centre in India, which may be visited by a committee constituted by D.G. Railways, GRP Headquarter, Lucknow to ascertain it's capability in repairing/maintenance of supplied equipments.

23. Firms will have to provide technical manuals etc. of the equipments free of cost. Firms will have to train staff for handling/operation/servicing of the equipments without any charges.

24. **U.P. GRP Hqrs reserves the right to accept or reject any tender either in partial or in full without assigning any reason thereof.**

2b. रेलवे स्टेशन चारबाग पर 22 अत्याधुनिक सी0सी0टी0वी0 कैमरों एवं मय सहवर्ती उपकरणों के सम्बन्ध में निविदा के नियम व शर्तें

- 1- निविदा फार्म दिनांक 08.10.2016 से 21.10.16 तक किसी भी कार्य दिवस में कार्यालय समय में पुलिस महानिरीक्षक रेलवे उ0प्र0, लखनऊ के कार्यालय से प्राप्त की जायेगी तथा दिनांक 22.10.2016 को समय 1615 बजे जीआरपी मुख्यालय कॉन्फेस हाल में उपस्थित निविदादाताओं /उनके अधिकृत प्रतिनिधियों के समक्ष तकनीकी समिति द्वारा खोली जायेगी। यदि दिनांक 22.10.2016 को राजकीय अवकाश घोषित होता है तो निविदायें अगले कार्यदिवस में खोली जायेंगी।
- 2- पुलिस महानिरीक्षक रेलवे उ0प्र0, लखनऊ द्वारा निर्धारित निविदा फार्म में ही निविदा प्रस्तुत किया जाय। यह फार्म पुलिस महानिरीक्षक रेलवे उ0प्र0, लखनऊ कार्यालय से रु09900/-जमा कर प्राप्त किये जा सकते हैं। अथवा निविदा प्रपत्र सू0पी0 पुलिस की वेबसाइट (<https://uppolice.gov.in>) पर उपलब्ध है, जिन्हें डाउनलोड कर टेण्डर प्रस्तुत किया जा सकता है, परन्तु डाउनलोड किये गए निविदा फार्म के साथ रु0 9900/- का बैंक ड्राफ्ट टेण्डर फार्म का मूल्य के रूप में संलग्न करना अनिवार्य होगा अन्यथा निविदा पर विचार नहीं किया जायेगा।
- 3- टेक्निकल बिड एवं फाइनेंशियल बिड(Technical Bid & Financial Bid) की एक-एक मूल प्रतियाँ तथा एक-एक डुप्लीकेट प्रतियाँ अलग-अलग सीलबन्ध लिफाफों में रखी जायेगी तथा ये चारों सीलबन्ध लिफाफे एक अन्य लिफाफे में सीलबन्ध करके प्रस्तुत किए जायेंगे। प्रत्येक लिफाफे के ऊपर उपकरण का नाम, निविदा संख्या तथा दिनांक का स्पष्ट उल्लेख होना चाहिए। लिफाफा नं0-1 में मूल टेक्निकल बिड(Original Technical Bid) के साथ कार्यालय द्वारा निर्गत मूल निविदा फार्म (Original Tender Form), उपकरण साहित्य / अर्नेस्ट मनी मूलरूप में तथा गारण्टी की अवधि सम्बन्धी एवं निविदा शर्तों के अनुसार आवश्यक अभिलेख रखने होंगे। लिफाफा नं0-2 में लिफाफा नं0-1 के अंदर रखे समस्त अभिलेखों की छायाप्रतियाँ रखी जायेगी। टेक्निकल बिड(Technical Bid) -में उपकरणों की निर्माता कम्पनी के नाम का उल्लेख अवश्य किया जाये। लिफाफा नं0-3 में मूल फाइनेंशियल बिड(Original Financial Bid) रखी जायेगी। लिफाफा नं0- 04 में लिफाफा नं0- 03 के अंदर रखे समस्त अभिलेखों की छायाप्रतियाँ रखी जायेगी। अपूर्ण या निर्धारित प्रपत्र के अलावा अन्य किसी प्रारूप में निविदायें तथा शर्तों को पूरा न करने वाली निविदाओं एवं प्रथम दृष्टया तकनीकी विशिष्टताओं को पूरा न करने वाली निविदाओं पर विचार नहीं किया जायेगा।
- 4- जीआरपी मुख्यालय कॉन्फेस हाल में तकनीकी समिति द्वारा उपकरण के मानक के अनुसार गुणवत्ता परखी जायेगी। इसके लिए तकनीकी समिति द्वारा अलग से सूचना निविदादाता को दी जायेगी।
- 5- अर्नेस्ट मनी (Earnest Money)-के रूप में रु66500/-का बैंक ड्राफ्ट यापोस्ट आफिस कैश सर्टिफिकेट (Post office cash certificate) जो कि "पुलिस महानिरीक्षक रेलवे ,उ0प्र0 लखनऊ" के पक्ष में देय हो प्रस्तुत की जा सकती है।
- 6- टेण्डर फार्म पुलिस महानिरीक्षक रेलवे, लखनऊ के कार्यालय में रखे हुए सील्ड बाक्स में दिनांक 08.10.2016 से 22.10.16 को 16:00 बजे तक किसी भी कार्य दिवस में निर्धारित समय के अन्दर डाले जा सकते हैं अथवा डाक द्वारा भी भेजे सकते हैं। डाक में हुयी किसी प्रकार की विलम्ब का उत्तरदायित्व निविदादाता का होगा। समय से न पहुँचने वाली निविदाओं पर विचार नहीं किया जायेगा।
- 7- किसी भी समय निविदा के किसी अंश अथवा पूर्ण निविदा को निरस्त किये जाने तथा उपकरण की संख्या घटाने /बढ़ाने का अधिकार कय समिति को है।
- 8- निविदादाता निर्धारित मानक (Specification) से बेहतर मानक (Specification) के उपकरण हेतु भी निविदा प्रस्तुत कर सकते हैं, परन्तु इस सम्बन्ध में अंतिम निर्णय लेने का अधिकार कय समिति को होगा।
- 9- आपूर्ति हेतु अनुबंधित फर्मों को निश्चित समयावधि में आपूर्ति करके भुगतान हेतु बिल चार प्रतियों में प्रस्तुत करना होगा। यदि किन्हीं कारणों से आपूर्ति निश्चित समयावधि में नहीं होती है तो आपूर्तिकता को विलम्बता के कारणों से यथा समय अधोहस्ताक्षरी को अवगत कराना होगा, जिसके सम्बन्ध में परीक्षणोपरान्तअपर पुलिस महानिदेशक रेलवे, उ0प्र0लखनऊ द्वारा निर्णय लिया जायेगा, जो कि आपूर्तिकर्ता फर्म को मान्य होगा। विलम्बता की स्थिति में उपकरण के कुल मूल्य का 10 प्रतिशत प्रति 15 दिन की दर से आर्थिक दण्ड चार्ज किया जायेगा, जो आपूर्तिकर्ता पर बाध्यकारी होगा। विलम्ब के लिये युक्ती युक्त कारण होने पर विभागाध्यक्ष द्वारा आर्थिक दण्ड चार्ज को घटाया जा सकता है।
- 10- उपकरण की संतोषजनक आपूर्ति अधिष्ठापन, परीक्षण (Post Delivery Inspection) एवं ए0टी0पी0 (Acceptance test procedure) सुनिश्चित हो जाने के पश्चात नियमानुसार देय करों की कटौती करके ही भुगतान किया जायेगा। भुगतान में विलम्बता की स्थिति में किसी प्रकार का ब्याज देय नहीं होगा।

- 11- कय समिति सुरक्षा वरीयता को दृष्टिगत रखते हुए न्यूनतम निविदा स्वीकार करने को बाध्य नहीं है तथा कान्ट्रेक्ट के किसी भी अंश/पूर्ण कान्ट्रेक्ट को निरस्त करने का सर्वाधिकार सुरक्षित रखती है। किसी भी प्रकार के विवाद की स्थिति में अंतिम निर्णय कय समिति का होगा।
- 12- किसी प्रकार का न्यायिक विवाद उत्पन्न होने पर न्याय क्षेत्र लखनऊ होगा।
- 13- अनुमोदित निविदादाता को उपकरणों की आपूर्ति कयादेश जारी होने के 30 दिन के अन्दर करनी होगी। यह आपूर्ति अपर पुलिस महानिदेशक रेलवे, उ0प्र0लखनऊ के निर्देशानुसार प्रदेश के किसी भी जनपद में (जैसी स्थिति हो) करनी होगी, जिसके लिए कोई अतिरिक्त किराया भाड़ा, चार्ज, इन्चोर्गेंस चार्ज इत्यादि भुगतान नहीं किया जायेगा।
- 14- उपकरण का मूल्य एवं देय टैक्स अलग-अलग प्रस्तुत किये जायेगे। निविदा का मूल्यांकन मूल्य तथा देय करों आदि को सम्मिलित करते हुए किया जायेगा। आपूर्ति आदेश में अंकित धनराशि के अलावा किसी प्रकार का अतिरिक्त भुगतान नहीं किया जायेगा।
- 15- आयातित उपकरणों के मामलों में निविदा निर्माता विदेशी कम्पनी द्वारा अधिकृत डीलरों/एजेंटों द्वारा ही प्रस्तुत की जायेगी। आयातित उपकरणों के मामलों में भारत में स्थित यदि किसी फर्म -द्वारा निविदा प्रस्तुत की जाती है तो ऐसे निविदादाता को टेक्निकल बिड के साथ निर्माता कम्पनी द्वारा उसके पक्ष में जारी उपकरण के विक्रय/गारण्टी/वारण्टी सम्बन्धी अद्यतन प्राधिकार पत्र भी प्रस्तुत करना अनिवार्य होगा, अन्यथा निविदा निरस्त कर दी जायेगी। इस सम्बन्ध में निर्माता विदेशी कम्पनी के भारत वर्ष में अधिकृत एजेंट/वितरक द्वारा किसी अन्य फर्म के पक्ष में निर्गत प्राधिकार पत्र मान्य नहीं होगा। इस सम्बन्ध में निर्माता विदेशी कम्पनी द्वारा निम्न तथ्यों की पुष्टि की जानी होगी:-
- (1) निविदा प्रस्तुत करने वाली फर्म उनके द्वारा प्राधिकृत है तथा सामग्री उनकी फर्म द्वारा निर्मित है।
- (2) निविदा प्रस्तुत करने वाली फर्म उनकी तरफ से निविदा प्रस्तुत कर सकती है।
- 16- उपकरण की आपूर्ति में असफल रहने पर जमानत धनराशि जब्त करने, फर्म को काली सूची में डाले जाने तथा नियमानुसार अन्य वैधानिक कार्यवाही किये जाने का अधिकार कय समिति के पास सुरक्षित है।
- 17- यदि निविदादाता फर्म उ0प्र0 की है तो उसे उ0प्र0 में व्यापार कर विभाग में पंजीकृत होने तथा यदि फर्म उ0प्र0 से बाहर की है, तो उसे केन्द्रीय व्यापार कर (Central sales Tax) विभाग में पंजीकृत होने का प्रमाण-पत्र संलग्न करना होगा।
- 18- निविदादाता फर्म को पिछले 3 वर्ष के वार्षिक टर्न ओवर (Turnover) के सम्बन्ध में अभिलेख प्रस्तुत करने होंगे। इसमें पिछले 03 वर्षों की बैलेंसशीट (Balance Sheet) तथा आयकर रिटर्न की स्वप्रमाणित प्रतियाँ भी प्रस्तुत करने होंगे। निविदादाता फर्म का पिछले 03 वर्षों के वार्षिक टर्न ओवर को औसत रु 20 लाख से कम न हो।
- 19 (ए)-निविदादाता फर्म को 100.00 रुपये के स्टैम्प पेपर नोटरी द्वारा प्रमाणित शपथ पत्र प्रस्तुत कि उनकी फर्म को किसी भी सरकारी विभाग द्वारा काली सूची में नहीं डाला गया है। यह शपथ पत्र निविदा सूचना के प्रकाशन की तिथि के पश्चात् का होना चाहिए।
- (बी)-निविदादाता अपराधिक गतिविधियों में लिप्त न होने के सम्बन्ध में 100.00 रुपये का शपथ पत्र उपलब्ध करायेगा। यह शपथ पत्र निविदा सूचना के प्रकाशन की तिथि के पश्चात् का होना चाहिए।
- 20- निविदादाता को आयकर विभाग द्वारा जारी पैन कार्ड (PAN CARD)/टैन कार्ड (TAN CARD) की छायाप्रतियाँ भी प्रस्तुत करनी होगी।
- 21- आपूर्ति हेतु आदेशित फर्म को आपूर्ति आदेश प्राप्त करने के पूर्व रु0 100.00 के स्टैम्प पेपर पर कयानुबन्ध हस्ताक्षरित करना होगा, जिसमें उपकरण की आपूर्ति का शेड्यूल, गारन्टी, वारण्टी, पेनाल्टी एवं भुगतान इत्यादि का विवरण होगा। अनुबन्ध पत्र के साथ कयादेश के मूल्य का 05 प्रतिशत जमानत धनराशि जो कि पुलिस महानिरीक्षक रेलवे, लखनऊ के पक्ष में देय-होगी तथा कम से कम तीन वर्ष तक वैध होगी, संलग्न करनी होगी। उक्त जमानती धनराशि वारण्टी अवधि समाप्त होने तक सिस्टम के सफल संचालन के 60 दिवस (03वर्ष 02माह)पश्चात् वापस की जायेगी।
- 22- निविदादाता फर्म को उपकरण की आपूर्ति करते समय इस बात का लिखित प्रमाण पत्र देना होगा कि उनके द्वारा जो उपकरण सम्पूर्ति किये जा रहे हैं वही उपकरण प्रदर्शन के दौरान प्रदर्शित किए गए थे तथा उसी उपकरण की निविदा टेक्निकल बिड में भी प्रस्तुत की गयी थी। इस सम्बन्ध में आपूर्ति के अवसर पर वांछित प्रपत्र के साथ उपकरण का सैम्पल, स्पेशिफिकेशन, सीरियल नम्बर, निर्माता कम्पनी का नाम/पता तथा वारन्टी कार्ड भी संलग्न किया जाना आवश्यक होगा। यदि भविष्य में आपूर्ति उपकरण डुप्लीकेट पाये गये तो फर्म के विरुद्ध नियमानुसार वैधानिक कार्यवाही की जायेगी।
- 23- सी0सी0टी0वी0 सिस्टम (CCTV System) एवं उसके सहवर्ती उपकरणों की वारण्टी अवधि 03 वर्ष की होगी।
- 24- निविदादाता फर्म को स्पेशिफिकेशन में अंकित नियम एवं शर्तों का पालन करना अनिवार्य होगा।
- 25- सी0सी0टी0वी0 सिस्टम (CCTV System) के वारण्टी अवधि की गणना (CCTV System) के संतोषजनक अधिष्ठापन (Installation) एवं तकनीकी समिति के ए0टी0पी0 (Acceptance test procedure)-की तिथि से प्रारम्भ होगी।
- 26- (CCTV System)का अधिष्ठापन निर्धारित स्पेशिफिकेशन के अनुसार कयादेश निर्गत किये जाने के से 30 दिन के अन्दर किया जाना होगा।
- 27- निविदादाता फर्म को इस तथ्य का प्रमाण पत्र अनिवार्य रूप से उपलब्ध कराना होगा कि भारत सरकार/राज्य सरकार के किन्हीं 02 कार्यालयों या उपक्रम में उनके द्वारा इसी प्रकार का सिस्टम अधिष्ठापित किया गया है।

- इस सम्बन्ध में सम्बन्धित फर्म को भारत सरकार/प्रदेश सरकार के कार्यालयों या उपक्रमों द्वारा निर्गत कयादेश की छाया प्रति संलग्न करना अनिवार्य होगा एवं संलग्न कयादेशों के संबंध में उस प्रोजेक्ट को पूर्ण करने व सफलतापूर्वक अधिष्ठापन करने का प्रमाण पत्र अथवा अण्डरटेकिंग लगाना अनिवार्य होगा, अन्यथा उनकी निविदा पर विचार नहीं किया जायेगा।
- 28- भारत सरकार/प्रदेश सरकार के कार्यालयों या उपक्रम में सिस्टम के अधिष्ठापन के पश्चात यदि उनके द्वारा सिस्टम की वार्षिक अनुरक्षण अनुबन्ध(Annual Maintenance Contract) फर्म द्वारा की जा रही हो तो उससे सम्बन्धित अभिलेख।
- 29- फर्म को सीसीटीवी सिस्टम के कार्य/अधिष्ठापन एवं संचालन के सम्बन्ध में कम से कम 03 वर्ष का अनुभव होना अनिवार्य है। इस सम्बन्ध में फर्म को अधिष्ठापन से सम्बन्धित कयादेश (Purchase Order) की छाया प्रति अनुभव के रूप में संलग्न करना तथा उनका सफलता पूर्वक पूर्ण करने का प्रमाण पत्र (Completion Certificate)/undertaking संलग्न करना अनिवार्य होगा।
- 30- सीसीटीवी सिस्टम के कैमरे एवं उनसे सम्बन्धित सहवर्ती उपकरणों के पम्फलेट्स एवं डेटा शीट-(pamphlets and datasheets) उपलब्ध कराना अनिवार्य होगा।
- 31- निविदादाता फर्म को 3 वर्ष की वारन्टी के पश्चात अगले 3 वर्षों हेतु काम्प्रेहेन्सिव एएमसी(Comprehensive A.M.C) के मूल्य भी वित्तीय निविदा में उपलब्ध कराने होंगे। एएमसी(A.M.C) की धनराशि तीनो वर्षों की अलग-अलग वर्षवार अंकित की जाये।
- 32- निविदादाता फर्मों द्वारा इन्टरनेट से डाउनलोड कर संलग्न किये गये अभिलेखों की जांच/पुष्टि अनिवार्य रूप से करायी जायेगी। यदि जांच/पुष्टि में संलग्न दस्तावेजों को गलत पाया गया तो निविदा निरस्त कर दी जायेगी तथा वैधानिक कार्यवाही की जायेगी।
- 33- यदि सम्बन्धित फर्म अधिष्ठापन के पश्चात आफ्टर सेल्स सर्विस देने में अस्मर्थ रहती है तो उनके विरुद्ध वैधानिक कार्यवाही किये जाने, जमानत धनराशि जब्त करने तथा भुगतान किये गये मूल्य की मय ब्याज सहित वसूली किये जाने का अधिकार विभाग के पास सुरक्षित है।
- 34- निविदादाता फर्म को इस बात का प्रमाण पत्र देना होगा कि उनके पास उचित रखरखाव हेतु कुशल तकनीकी विशेषज्ञों की टीम है व स्वयं का सर्विस सेन्टर है। इस सम्बन्ध में सम्बन्धित फर्म को सर्विस सेन्टर का नाम/पता/कर्मियों के नाम व मोबाइल नम्बर उपलब्ध कराने होंगे, जिसकी पुष्टि विभाग द्वारा की जायेगी।

नोट- इस सम्पूर्ण निविदा फार्म में अपर पुलिस महानिदेशक रेलवे, उ0प्र0 का आशय पुलिस महानिदेशक रेलवे, उ0 प्र0 से होगा।

3)-TECHNICAL OFFER
TENDER No.-IG RL/13-30/2016.

The tenderer should furnish the following details to be pre-qualified for the price bid opening.

Sl	Description	To be filled by Tenderer	Page No. of Tech. bid
1	Name of the organization and year of Incorporation.		
2a	Nature of organization		
b	Letter of authority In the case of sole distributor (or) dealer the tenderer must enclose a Letter of Authority for at least Cameras, VMS, Switches & Server from the Principals/OEM to the effect that they will support the quoted equipment for installation, testing and commissioning and maintenance for its prescribed life.		
3	Address of the Registered office of tenderer with phone number and fax No. & email		
4	Registration No. VAT: CST: Self-attested copy of the document to be attached		
5	Audited balance sheet, ITR of the just concluded year and the previous two years (documents to be attached)		
6-i	Details of Service Centre operated by the tenderer, to provide services for the supplied equipments in India (Address with phone number and fax number & e-mail)		
ii.	Please mention only one make and model of the equipment/equipments/ items being offered. Bids where more than one make & model are proposed for any equipment shall not be considered.		
iii.	Technical Specification - Enclose pamphlets with specification datasheet and mention the Website.		
iv.	Mention 'Yes' or 'No' in front of required Technical Specification given along with the tender form by the GRP Hqrs. Yes must be supported by datasheet(If any parameter is not supported by datasheet an undertaking must given by OEM)		
v.	Adequate number of persons of the organization should be trained for operation/servicing of offered equipments free of cost.		
vi.	The firm must provide warranty period of Min. 3 years for the entire		

	system.		
vii.	Supply documents in triplicate such as operation Manuals, user manuals, software with CDs, circuit diagram and other relevant materials along with each equipment, free of cost.		
viii.	Supply trouble shooting and service manuals free of cost.		
ix.	In case any fault occurs in any of the equipments during warranty period, the supplier firm shall make arrangement to repair or replace within 24 hours after intimation received or shall make stand-by arrangement to provide new equipments.		
x.	All the trainings/after-sales/warranty services shall be provided at the consignee's address		
xi.	The Tenderer is required to support the spare parts and accessories of the quoted item after warranty period for the next six years for all the products.		
7)	Name of the Government Departments or undertakings, where SITC of similar projects has been completed (enclose copy of major purchase orders and certificate/undertaking of their completion). Atleast one purchase order should be more than three years old from the date of publication of the tender.		
8a)	Tender Money Deposited D.D. No: DATE : Name of the Bank: Amount (in Rs.):		
8b)	Earnest Money Deposited D.D. No: DATE : Name of the Bank: Amount (in Rs.):		
9)	Indicate your delivery schedule (against the various activities listed) Letter of award :D Signing of Agreement :D+ days Supply of equipments :D+30days		

4) FINANCIAL OFFER

TENDER No.-----

1. I/We hereby quote to supply the goods and materials in the under writing Schedule in the manner in which and within the time specified, as set forth in the conditions of agreement stated above at the rates given in the Schedule below. I/We hereby agree that in the event of tender being accepted, all the conditions in this tender document and those contained in the acceptance letter will be binding upon me/us and will, along with the quotation, be converted into and shall be deemed to be a completed agreement between me/us and the Governor of Uttar Pradesh from date of acceptance letter. I/We hereby further agree that if so required by the U.P.-GRP HQ, I/We shall execute formal Agreement Deed.
2. I/We herewith deposit a sum of Rs. as earnest money and should I/We fail to execute a fresh Deed of agreement if so required by the U.P.-GRP HQ on behalf of the Governor of Uttar Pradesh and deposit the security as laid down in the tender notice within 10 days of the acceptance of my/our tender, I/We hereby agree that my/our liabilities under the agreement, the above sum of the earnest money will be forfeited for the Governor.

SCHEDULE OF RATES

Sl. No.	Description of equipments	Qty. / Unit	Basic price	Taxes		Total	Discount if any	Make and Brand
				Sales Tax/ VAT	Excise Duty			
1								
2								

All rates are F.O.R.
2016

Dated the day of

Signature

Address

Name of supplying firm

N.B. Please do not forget to fill in all the above columns.

Accepted.....

Signed

Designation.....

For and on behalf of the Governor of Uttar Pradesh.

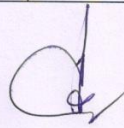
5)-CHECK LIST FOR SUBMITTING OFFERS

निविदा डालने के बारे में चेक लिस्ट (मुख्य बिन्दु)

चेकलिस्ट मात्र सुविधा हेतु संलग्न है। कृपया उपरोक्त निविदा शर्तों को पढ़कर उनके अनुसार उनको पूरा करने की पुष्टि करने वाले समस्त अभिलेख निविदा फार्म के साथ संलग्न कर प्रस्तुत करें।

क्र० सं०	विवरण	Yes/No	Page No.
1	दो अलग-अलग बन्द लिफाफों में टेक्नीकल बिड (ओरिजिनल एवं डुप्लीकेट), जिसमें Original Technical Bid के लिफाफे में ई0एम0डी0 लगी हो तथा दो अलग-अलग बन्द लिफाफों में फाइनेन्सियल बिड (ओरिजिनल एवं डुप्लीकेट)/उक्त चारों लिफाफे एक सील बन्द बड़े लिफाफे में जिस पर निविदा संख्या, दिनांक व उपकरण का नाम एवं चेकलिस्ट के अनुरूप अभिलेखों की उपलब्धता अंकित हो।		
2	टेक्नीकल बिड के महत्वपूर्ण बिन्दु- (i) यदि डीलर/डिस्ट्रीब्यूटर हो तो Principals से टेक्नीकल ऑफर प्रपत्र के 2(बी) एवं Documents required to fill tender form की शर्त संख्या-3को पूरा करते हुए निर्धारित प्रारूप पर Authority Letter संलग्न करें। (ii) VAT & CST (attach self attested documents.) (iii) Audited Balance Sheet & ITR of the just concluded financial year and the previous two years. (Attach documents) (iv) Details of service centres in U.P./NCR (Address/Phone/Fax/ e-mail) (v) (a) Mention Make & model of the each equipments being offered (b) Enclose pamphlets with specifications data sheet. (c) Mention Yes or No in front of departmental Technical Specifications provided by the deptt. reg compliance by the offered equipment. (vi) Valid EMD, as desired in Tender Notice		
3	Conditions of Agreement का प्रत्येकपृष्ठ Authorised signatory द्वारा नाम सहित हस्ताक्षरित करना तथा स्टैम्प लगाना।		
4	Guidelines/Instructions for preparation & submission of correct tenders में अंकित प्रत्येक बिन्दु के अनुपालन हेतु Tender form के प्रत्येक पृष्ठ Authorised signatory द्वारा नाम सहित हस्ताक्षरित करना तथा स्टैम्प लगाना।		
5	निविदा सूचना की शर्त के अनुसार रू0 100.00 के स्टाम्प पेपर पर फर्म एवं ऑफर किये जा रहे उपकरणों को काली सूची में न डालने विषयक शपथ-पत्र।		
6	निविदादाता द्वारा रू0 100.00 के स्टाम्प पेपर पर उनकी आपराधिक पृष्ठभूमि न होने तथा न ही किसी आपराधिक गतिविधि में सम्मिलित होने विषयक शपथ पत्र।		
7	निविदादाता द्वारा सम्पूर्ण टेण्डर डाक्यूमेंट पर पृष्ठ संख्या अंकित करना तथा प्रत्येक पृष्ठ समुह हस्ताक्षरित करना।		
8	निविदादाताओं द्वारा सम्पूर्ण टेक्नीकल बिड के सम्बन्ध में (Index) इण्डेक्स बनाकर संलग्न करना।		

9	Name of the Government Departments or undertakings, where SITC of similar projects has been completed (enclose copy of major purchase orders and certificate/undertaking of their completion). Atleast one purchase order should be more than three years old from the date of publication of the tender.		
10	निविदादाता फर्म का सर्विस सेन्टर का विवरण पता व फोन नम्बर।		
11	निविदादाता फर्म को कम से कम सीसीटीवी कैमरे, वीडियोएस0, स्विच और सर्वर की मूल निर्माता कम्पनी (ओ.ई.एम.) द्वारा इस बात का प्रमाणपत्र उपलब्ध कराना अनिवार्य होगा कि उनके द्वारा निविदादाता फर्म को आपूर्ति/अधिष्ठापन हेतु प्राधिकृत किया जा रहा है।		
12	सी.सी.टी.वी. सिस्टम के कार्य/अधिष्ठापन के सम्बन्ध में कम से कम 02 कय आदेश अवश्य लगाये जाये इनमें से एक कयादेश टेण्डर के जारी के करने की तिथि से कम से कम 03 वर्ष पूर्व का हो। सभी कय आदेशों के सम्बन्ध में उस प्रोजेक्ट को पूर्ण करने व सफलतापूर्वक अधिष्ठापन करने का प्रमाणपत्र अथवा अण्डरटेकिंग लगाना अनिवार्य होगा।		
13	निविदादाता फर्म का पिछले 03 वर्षों के वार्षिक टर्न ओवर का औसत रु 20 लाख से कम न हो।		





191



**RFP FOR IP BASED CCTV
SURVEILLANCE AT RAILWAY
STATION LUCKNOW**



1 OBJECTIVE :

This document is the functional requirement for proposed procurement of IP Base Surveillance System at railway Stations Lucknow In Uttar Pradesh .

2 INTRODUCTION AND BACKGROUND

- The Headquarters of ADG railway Uttar Pradesh is executing agency for this facility.
- The facility will be used for official purposes and shall house the Lucknow railway station.
- This facility, given its location and purpose, requires extensive electronic security systems to ensure all threats are mitigated and all precautions are undertaken to ensure peaceful operations.
- 22 nos of cameras will be installed at railway station Lucknow according to location attached.
- The proposed CCTV solution will be an IP based solution with HD cameras (1080p) being recorded at full frame rate.
- The recordings of each camera installed at railway stations Lucknow will be internally in the server.
- The VMS instance deployed at each of the Railway station will also be responsible for integrating the external systems if required.

3

PROPOSED SOLUTION

We propose the High Definition IP Based Surveillance System for railway Campus the Points to be covered

- Entry Ways to Station.
- Entry to be Platform.
- Booking Windows.
- Waiting Halls.
- Parking Areas
- Inside stations at many places

Cameras type:

- IP PTZ camera Min. 2MP
- IP Bullet Camera Minimum 2MP or Higher
- IP FIX BOX type camera min-2MP
- IP Fish eye panoramic camera 5 MP

[Handwritten signatures and initials]

Recording

The Internal recording should have capacity of Minimum Storage of 15 days at Full resolution.

3 LED/LCD Display

- LED display will be installed in local control room for monitoring videos of all the cameras installed at railway station Lucknow premise as per specification given in technical specs.

4 -

TECHNICAL SPECIFICATIONS

(a) PTZ CAMERA

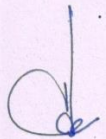



Outdoor Full HD IP Speed Dome Camera with 30X optical zoom True (Day/Night):
a. The Camera should have the following feature:
<ul style="list-style-type: none">• 30x optical zoom and 12x digital zoom total up to 360x zoom• High frame rate of 60 fps to provide smoother and less blurry moving pictures
o Full HD (1920 x 1080p), 60fps
o Wide Dynamic Range Capability upto 130db.
o Weatherproof, water proof and dust tight with IP66 rated enclosure, heater and fan built in
o High speed of pan up to 700°/sec and tilt up to 700°/sec
o Minimum 256 Preset Positions & 5 Tours
o High speed preset at 700 °/sec with high accuracy with +/-0.045°
o Built-in web browser for easy configuration
o Shall support dynamic noise reduction.
o Shall Support H.264, MPEG-4, JPEG
<ul style="list-style-type: none">• ONVIF Compliant profile S conformance• The camera shall have polygonal privacy zone masking which blocks out unwanted or prohibited area within the video image to protect privacy. The camera shall be capable of masking up to 12 areas.
<ul style="list-style-type: none">• The camera shall support IP Filtering, whereby access to the camera can be restricted to one or more groups of selected users. Up to 10 different groups can be established by defining an IP address range for each group.
<ul style="list-style-type: none">• The camera shall be capable of limiting the bandwidth from 64 kbps to 32 Mbps in H.264 (High/Main/Baseline Profile), and from 0.5 Mbps to an unlimited bandwidth in JPEG.
<ul style="list-style-type: none">• The camera shall have an internal memory size of approx. 40 MB for buffering.

- The camera shall be capable of pre- and post-alarm buffering.
- The camera shall have an AGC capability up to 28 dB.
- White balance shall be selected among Auto, Indoor, Outdoor, One push WB, Sodium Vapour lamp, or Manual.
- The Camera shall have Defog Image Processing feature to clear up fog, mist, and haze in a scene to achieve more visible images.
- The Camera shall have Gyroscopic Image Stabilizer shall minimize the effect of camera shake or vibration, reducing any image blur.

**Minimum Technical Requirements
In addition to above-**

Image Device	1/8" Exmor CMOS or better
Minimum Illumination	Color: 1.0lx (F1.6, shutter 1/30sec, AGC ON, 30IRE[IP]) or better B/W: 0.18lx (F1.6, shutter 1/30sec, AGC ON, Night Mode, 30IRE[IP])
No. Of effective pixels	Approx. 2.3 mega pixels
Electronic Shutter	1~1/10,000 Sec
Auto Gain Control	Auto/Manual
Exposure control	Auto, Full auto, Shutter-priority, Iris-priority, Manual, EV compensation, Backlight compensation
White balance mode	Auto, Indoor, Outdoor, One-push WB, ATW, Manual
Lens Type	Auto focus zoom lens
Zoom Ratio	30X Optical, 12X digital
Horizontal Viewing angle	65 to 3.2 degrees
Focal Length	f=4.3 to 129 mm
F Number	F1.6 to F4.7
Minimum object distance	10mm (wide) to 1200mm (tele)
Pan angle	360 degrees endless rotation (No Elec/Mechanical Flipping)
Pan speed	300 degrees/s (max.)
Tilt angle	220 degrees (with e-flip)
Tilt speed	300 degrees/s (max.)
Preset	256
Preset pan/tilt speed	700 deg/s
Tour	5
Day/Night	Yes, IR cut filter
Wide Dynamic	Yes (130 db)
Digital Noise Reduction	Yes

Video Compression format	H.264, MPEG-4, JPEG
Maximum Frame Rate	60 fps (H.264) / 60fps (JPEG), VBR/CBR
Audio Compression	G.711/G.726/AAC
Intelligent Motion Detection	Yes, On board analytics. Object removal, Object left over, Trip wire, Face detection.
Voice alert	Required. Shall support the Voice alert function, which can automatically play an audio file stored on the camera by an alarm trigger using motion detection
Camera tampering	Required
Protocols	IPv4, IPv6, TCP, UDP, ARP, ICMP, IGMP, HTTP, HTTPS, FTP (client/server), SMTP, DHCP, DNS, NTP, RTP/RTCP, RTSP, SNMP (MIB-2)
S/N ration	More than 50 db
Streaming Capability	Triple streaming, VBR/CBR(Selectable)
	First Stream H.264 : 1920x1080 @25FPS
	lInd Stream H.264 : 1280x720 @25FPS
	lllrd stream H.264: 640x480 @25FPS
Ethernet	10BASE-T/100BASE-TX (RJ-45)
Local storage	SD/SDHC card
Sensor Input	4
Alarm output	2
Image stabilizer	Required
Analogue video output	Required
No. Of clients	5
External Micro phone Input	Mini-jack
Audio line put	Mini-jack
Operating temperature	-40 to 60 degree
Operating humidity	20 to 80%
Safety regulatory	UL,Fcc, EN
Power Requirement	HPOE, 24V AC
Ingress protection	IP66
Vandal Resistant	IK10

(b) BULLET IR CAMERA

Full High Definition 2 MP (1920x1080) IR Bullet Type True D/N Camera:	
Full High resolution IP colour camera shall be of True day / night fixed Vandal Resistant, IP66 rated bullet type suitable for Indoor/Outdoor surveillance with minimum following features.	
1/2.9" progressive scan CMOS sensor with great low lux performance Minimum illumination of 0 lx in B/W mode (IR illuminator: ON) and : 0.1lux in colour mode @ F1.2	
The Camera shall provide smoother and less blurry moving pictures with the high frame rate of 30 FPS in PAL and 30 FPS in NTSC.	
Camera shall provide triple streaming. Two H.264 and one JPEG.	
Camera Support Full High Definition mode (1920 x 1080) real-time	
Minimum 2 Mega pixels Imager.	
Supports various protocols: IPv4, IPv6, TCP, UDP, ARP, ICMP, IGMP, HTTPs, FTP	
Camera shall support Dynamic Noise Reductions	
Camera shall support Day/night switch by IR Cut filter	
Camera shall support Web server for remote setup of camera video and network parameters	
Camera shall support Power over Ethernet (PoE)	
Camera shall support Video compression format : H.264 & JPEG	
Camera shall Support Wide dynamic Range (Min 80db or better) – OEM to provide supporting document in this regard.	
Support Visibility enhancer	
Required edge analytics features	
Temper Proof – To generate alarm in case of tempering event i.e. spraying the camera, blocking the FoV, covering the lens, changing the mounting direction etc..	
E-PTZ Function – The camera should support e-PTZ function.	
Camera shall have Image stabilizer function.	
The camera shall be compliant with the Open Network Video Interface Forum Profile S (ONVIF Profile S) conformance.	
Image Device	1/2.9 type progressive scan CMOS sensor or better
Minimum Illumination	0.1lx (Color), 0.lux (BW, IR Illuminator ON) at 50 IRE and 1/30s shutter speed or better
Number of effective pixels	Approx 2.14 Megapixels or better
Electronic shutter speed	1 s to 1/10000 s
Gain control	Low, Mid, high
Exposure control	Auto, EV Compensation, Auto Slow shutter
white balance mode	Auto(ATW, ATW-PRO), preset, one push WB, Manual
Lens Type	CS mount lens
Zoom Ratio	Optical 3X

Digital Zoom	4 x digital zoom
Horizontal viewing angle	105 degree to 35.2 degree
Focal length	f=3mm to 9.0mm
F-number	F1.2(Wide), f 2.1 (TELE)
Wide dynamic range	Required (90dB)
IR Illuminator	Yes (Wave length: 850 nm [typical], IR LED 20 pieces)
IR Working distance	30 m (50 IRE)
Privacy Masking number	20
powered focus	yes(Easy focus)
Image enhancement	Visibility enhancer
Day/Night	Yes
Noise reduction	Yes
Codec image size(HxV)	1920 x 1080, 1280 x 720, 1024 x 576, 720 x 576, 720 x 480, 704 x 576, 640 x 480, 640 x 360, 352 x 288, 320 x 180(H.264, JPEG)
Video compression format	H.264 (High/Main/Baseline Profile), JPEG
Codec streaming capability	Triple streaming, VBR/CBR (Selectable) Image 1 : 1920x1080@ 25FPS Image 2: 1280x720@25Fps. Image 3 @ 640x480@25FPS
Maximum frame rate	H.264: 30fps (1980 x 1080) JPEG: 30fps (1280 x 720)
Built in analytics	Yes, Built in analytics such as Passing, Face detection, object left over, object removal. Motion detection.
Protocols	IPv4, IPv6, TCP, UDP,ARP, ICMP, IGMP, HTTPs, FTP, (Client Only), SMTP, DHCP, DNS, NTP, RTP/RTCP, RTSP, SNMP (MIB-2)
ONVIF Conformance	Yes
Authentication	IEEE802.1X
Signal system	NTSC/PAL
S/N ratio	More than 50Db
Ethernet	10Base-T/100 Base-TX (RJ-45)
No. of clients	20
E flip function	Required. When the camera passes down the position, electronically flip the image by 180 degree.
Electronic Pan tilt zoom	Required
Power requirements	POE
working temperature	minus 10 to plus 50 deg.
Storage temp.	minus 20 to plus 60 deg.
IP Rating	IP66
Built in Heater	Required
Safety regulation	UL, FCC, EN/CE

(c) FIX BOX TYPE CAMERA

Full High Definition IP Fixed Box Type True D/N Camera:

Full High resolution IP colour camera shall be of day / night fixed box type suitable for outdoor surveillance with minimum following features.

1/3" progressive scan CMOS sensor with great low lux performance: 0.1lux @ F1.2

Support Full High Definition mode (1920 x 1080) real-time

Minimum 2 Mega pixels Imager.

Camera shall support triple streaming. Two H.264 and one Jpeg or in any combination.

Camera shall support high frame rate 30FPS@H.264 for capturing fast moving object without blur.

Supports various protocols: IPv4, IPv6, TCP, UDP, ARP, ICMP, IGMP, HTTPs, FTP

Dynamic Noise Reductions

Day/night switch by IR Cut filter

Web server for remote setup of camera video and network parameters

Power over Ethernet (PoE)

Supports CS mount lens

Video compression format : H.264, JPEG

Support Wide dynamic Range (90db for 1080p) – OEM to provide supporting document in this regard.

Support Visibility enhancer

Required edge analytics features

The camera shall have a camera tampering detection function that alerts the operator if the camera is tampered with. Tampering can include spraying of the camera lens, covering it with a cloth, or changing of the mounting direction.

The camera shall have an Image Stabilizer function, which can display with less video sway when the camera is installed in a place with vibration..

Image Device	1/3 type progressive scan CMOS sensor or better
Minimum Illumination	0.1lx (Color), 0.07 lux (BW) at 50 IRE and 1/30s shutter speed or better
Number of effective pixels	Approx 2.1 Megapixels or better
Electronic shutter speed	1 s to 1/10000 s
Gain control	Low, Mid, high
Exposure control	Auto, EV Compensation, Auto Slow shutter
white balance mode	Auto(ATW, ATW-PRO), preset, one push WB, Manual
Lens Type	CS mount lens
Zoom Ratio	Optical 2.9X
Digital Zoom	4 x digital zoom
Horizontal viewing angle	114.2 degree to 40 degree
Focal length	f=2.8mm to 8.0mm
F-number	F1.2(Wide), f 1.9 (TELE)

Wide dynamic range	Required (90dB) or better
powered focus	yes(Easy focus).The camera shall have an Easy Focus function, which adjusts the camera focus via the Easy Focus button on the rear of the camera or remotely via the GUI.
Image enhancement	Visibility enhancer
Day/Night	Yes
Noise reduction	Yes
Codec Image size(HxV)	1920 x 1080, 1280 x 720, 1024 x 576, 720 x 576, 720 x 480, 704 x 576, 640 x 480, 640 x 360, 352 x 288, 320 x 180(H.264, JPEG)
Video compression format	H.264 (High/Main/Baseline Profile), JPEG
Codec streaming capability	Triple streaming, VBR/CBR(Selectable)
	First Stream : 1920x1080 @25FPS
	IInd Stream : 1280x720 @25FPS
	IIIRD stream : 640x480 @25FPS
Maximum frame rate	H.264: 30fps (1980 x 1080) JPEG: 30fps (1980 x 1080)
Built in analytics	Yes, Built in analytics such as Passing, Face detection, object lef over, object removal. Motion detection.
Protocols	IPv4, IPv6, TCP, UDP,ARP, ICMP, IGMP, HTTPs, FTP, (Client Only), SMTP, DHCP, DNS, NTP, RTP/RTCP, RTSP, SNMP (MIB-2)
ONVIF Conformance	Yes
Authentication	IEEE802.1X
Signal system	NTSC/PAL
S/N ratio	More than 50Db
Ethernet	10Base-T/100 Base-TX (RJ-45)
No. of clients	20
Analogue monitor output	Required
Power requirements	POE
working temperature	minus 10 to plus 50 deg.
Storage temp.	minus 20 to plus 60 deg.
Safety regulation	UL, FCC,

(d) Video Monitoring, Recording & Management software

Sr.No	Description	Compliance Yes/No	Reference Document for Cross verification
1	<p>General</p> <p>The Video Management System shall be a fully distributed solution, designed for limitless multi-site and multiple server installations requiring 24/7 surveillance with support for devices from different vendors. The Video Management System shall offer centralized management of all devices, servers and users and must empower a flexible rule-based system driven by schedules and events.</p> <p>VMS shall already support IP cameras from at least fifty (50) major vendors. Bidders shall clearly list in their proposal the brands and models already integrated into VMS.</p> <p>To ensure openness, VMS and cameras may or may not be from the same manufacturer.</p> <p>VMS shall support installation and ability to run on virtualized windows servers</p> <p>VMS manufacturer shall provide their SDK (or any other integration means) libraries and documentation) to ensure a seamless integration with any other system</p> <p>VMS shall be open to any standard storage technologies integration.</p> <p>VMS shall be open to any video wall system integration.</p> <p>VMS shall have the possibility to integrate external Video Analytics systems.</p> <p>The VMS system shall be a scalable client – server architecture built using well known operating systems</p> <p>The VMS system shall enable recording to be done at the aggregation sites and shall allow the local Control center to import selected video's on demand.</p> <p>Aggregation site types shall be categorized according to function and size as per the table below.</p> <p>To facilitate the VMS system architecture, the BIDDER shall ensure that sufficient capacity is designed into the data communications & telecommunications Infrastructure to deliver the required functionality, along with the ability to allocate and reserve resources (including bandwidth).</p> <p>The VMS data communications and telecommunications network shall use a suitable transport medium and</p>		

associated cabling and data transmission infrastructure that will support real-time video display of cameras at the nominated operations centers. The type of transmission network shall be determined by the BIDDER.		
The VMS system shall be compatible to single and multiple processor servers. The server processor & hardware shall be optimized in all cases.		
The VMS system shall cluster the processing & memory load across several machines. The failure of any one server in the solution shall not cause a failure in the entire system.		
The VMS system device drivers shall be stored separately to the central core application to ensure any instability in 3rd party SDKs do not affect the core application.		
The VMS management server shall be able to intelligently scan an IP network for new devices (cameras or servers) along with automatic model detection.		
Network Infrastructure and Installation are the responsibility of the Bidder. Network components both active and required for the successful implementation of the video surveillance detailed in this tender shall be provided by the Bidder. The network infrastructure shall meet the streaming requirement of the project without any bottlenecks. The network infrastructure shall support UDP multicast, UDP unicast and TCP transmission.		
The VMS system shall provide an integrated secure, scalable and easily accessible software-based solution for the management of the existing & future physical security infrastructure		
The VMS system shall provide a powerful and efficient management interface for all the security systems across all monitored sites.		
The Video Management System shall be a fully distributed solution, designed for limitless multi-site and multiple server installations requiring 24/7 surveillance with support for devices from different vendors. The Video Management System shall offer centralized management of all devices, servers and users and must empower a flexible rule-based system driven by schedules and events.		
The Video Management System shall contain recording servers used for recording video feeds and for communicating with cameras and other devices. The recording servers shall process the recordings and playback the video streams.		

The Video Management System shall include a federated architecture allowing clients on the host system with the right user rights to view video sources belonging to multiple independent Video Management Systems simultaneously, as if they were on The Video Management System shall contain a management server that shall be the central manager of the system and control recording servers, cameras, devices and users. The management server shall handle the initial client login, system configuration and logging.		
The management server shall allow access to a system manager from where the administrator can configure and manage all servers, cameras and users.		
The system shall allow the management server to be installed on multiple servers within a cluster of servers ensuring that another server in the cluster automatically takes over in case the first server fails.		
The Video Management System shall support installation and ability to run on virtualized Windows® servers.		
The Video Management System shall allow an unlimited number of cameras to be connected to each recording server and an unlimited number of recording servers to be connected to each management server across multiple sites, if required.		
The Video Management System shall support high availability of recording servers. A failover option shall provide standby support for recording servers with automatic synchronization to ensure maximum uptime and minimum risk of lost data.		
The Video Management System shall support a versatile rule system including scheduled or event-driven actions with numerous options including support to time profiles.		
The Video Management System shall support Microsoft Windows XP Professional, Microsoft Windows Server 2003, Microsoft Windows Server 2008, Microsoft Windows Vista (Business/Enterprise/Ultimate) and Microsoft Windows 7 (Business/Enterprise/Ultimate) with the latest patches and service packs installed. The system must use DirectX and .NET Framework.		
The Video Management System software shall include multicast and multi-streaming support.		
The Video Management System shall include automatic camera discovery.		
The Video Management System shall support archiving for optimizing recorded data storage through unique data storage solutions by combining performance and		

scalability with cost efficient long-term video storage.		
The Video Management System shall incorporate fully integrated matrix functionality for distributed viewing of any camera in the system from any computer with the client viewer.		
The Video Management System shall incorporate intuitive map functions allowing for multilayered map environment. The map functionality shall allow for the interactive control of the complete surveillance system, at-a-glance overview of system integrity, and seamless drag-and-drop integration with video wall module option.		
The Video Management System shall support 56-bit encryption of video for export purposes. The 56-bit encryption shall meet the US Government requirements on export limits for encryption.		
The Video Management System shall support full two-way audio between clients and remote devices. Two-way audio integration shall support the following features and functions:		
The Video Management System software shall provide fast evidence export by exporting in video to various formats, including video from multiple cameras in encrypted native database format with an included viewer.		
The Video Management System shall show full awareness of the system through audit logs and shows user activity through comprehensive logs.		
The Video Management System shall include support for a frame work data module designed to integrate multiple third party Video Content Analysis (VCA) solutions seamlessly into client viewer environments.		
The Video Management System shall include a Software Development Kit (SDK) that offers important capabilities for integrating the Video Management System with third party software and applications.		
The Video Management System shall include a stand-alone viewer application to be included with video exported from the client viewer application. The viewer application shall allow recipients of the video to browse and playback the exported video without installing separate software on their computers.		
The Video Management System shall include support for Active Directory to allow users to be added to the system. Use of Active Directory requires that a server running Active Directory, acting as a domain controller,		

	to be available on the network.		
	The Video Management System shall be designed to support each component on the same computer for efficiency in smaller systems, or each component on separate systems for large system deployments.		
	Edge Storage		
	Edge storage shall secure that when a lost or broken connection is back up, the data stored on the camera's internal storage shall be retrieved and stored in the media database.		
	Edge storage shall secure that after recovery from a malfunction it shall be possible to play back and view the video, and audio recorded by the device, while the malfunction persisted		
2	Bookmarking		
	A bookmarking feature shall be included in the Video Management System, allowing the client viewer users to mark incidents on live and/or playback video streams.		
3	Optimized Video Archiving		
	Administrators shall be able to select a storage container for each device and move a device from one storage container to another, or move all recordings inclusive archives to the new storage container, or delete them all.		
	Administrators shall be provided with an overview of the defined storage containers, their archives with path, and free and used space on the drives for each device, including the used storage space in the recording database, and in archives.		
4	Failover Support		
	The system shall support automatic failover for recording servers. This functionality must be accomplished by a failover server that shall work as a standby unit, which takes over in the event that one of a group of designated recording servers fails. Recordings shall be synchronized back to the original recording server once it is back online.		
	The system shall support multiple failover servers for a group of recording servers.		
	The system shall provide monitoring of all failover servers from the graphical alarm management module.		
	The system shall provide seamless access to recordings on the failover Server for all clients through the same client views once the services are fully started.		
5	Multicast Support		
	The system shall support multicasting of video feeds to client workstations in order to conserve network		

	resources. Multicasting should be enabled from the recording servers and not directly from the cameras. Thus the IGMP network would be necessary only for the switches where server and clients are connected.		
	Multicasting shall send a single stream of video to multiple clients, where the stream may be decoded and displayed on all clients simultaneously. This functionality shall support virtual matrix configurations.		
	The Infrastructure provided for the system shall support Internet Group Management Protocol (IGMP) for each remote network.		
	The system shall automatically switch to unicast, if the client fails to connect to the multicast stream.		
6	Multi-streaming Support		
	The recording server must accept, display and record individual streams of video from each camera that supports it, for example, display a stream in H.264 format and record another stream in MPEG4 format. The intent of this functionality shall be providing independent streams of video from the camera to the server with different resolution, encoding and frame rate.		
	Multi-streaming support shall allow the system to be configured with H.264 with a high frame rate for live viewing and shall allow the system to be configured with high resolution H.264 at low frame rates for recording and playback.		
	The system shall allow recorded video to be recorded at 8fps.		
7	SNMP Support		
	The system shall act as an SNMP agent which can generate an SNMP trap as a result of rule activation in addition to other existing rule actions.		
	The system shall be able to utilize Microsoft Windows SNMP Service for triggering of SNMP traps.		
8	NAT Firewall Support		
	The system shall support port forwarding, which must allow clients from outside of a Network Address Translation (NAT) firewall to connect to recording servers without using a VPN.		
	Each recording server shall be mapped to a specific port and this port must be forwarded through the firewall to the recording server's internal IP address.		
9	Management Server Redundancy		
	The management server shall provide a resilient system solution based on Windows Server Clustering, to secure		

	maximum uptime.		
10	Alarms Support		
	The alarm support shall allow for continuous monitoring of the operational status and event-triggered alarms from servers, cameras and other devices.		
	The alarm support shall provide a real-time overview of alarm status, or technical problems, while allowing for immediate visual verification and troubleshooting.		
11	Matrix Functionality		
	The system shall include an integrated matrix solution for distributing video to any computer with the client viewer installed. A computer on which the matrix-triggered images can be shown must be known as a matrix recipient.		
	The client viewer shall provide remote users with a comprehensive suite of features:		
	It shall be possible to view live video from cameras on the surveillance system from 1 to 100 per view.		
	It shall be possible to playback recordings from cameras on the surveillance system, with a selection of advanced navigation tools, including an intuitive timeline browser.		
	It shall be possible to create and switch between an unlimited number of views, each able to display video from up to 100 cameras from multiple servers at a time.		
	The system shall allow views to be created which are only accessible to the user, or to groups of users based on 37 different layouts optimized for 4:3, 4:3 Portrait, 16:9 and 16:9 Portrait display ratios.		
	It shall be possible to access views of cameras on any PC with a client viewer application installed.		
	It shall be possible to use multiple screens as well as floating windows for displaying different views simultaneously.		
	It shall be possible to quickly substituting one, or more of a view's cameras with other cameras.		
	It shall be possible to view images from several cameras in sequence in a single camera position in a view – a so called carousel.		
	It shall be possible to view video from selected cameras in greater magnification and/or higher quality in a designated hotspot.		
	It shall be possible to receive and send video through the matrix functionality.		
	It shall be possible to include HTML pages and static images (for example, maps, or photos) in views.		
	It shall be possible to control PTZ cameras.		

It shall be possible to use digital zoom on live as well as recorded video.		
It shall be possible to activate manually triggered events.		
It shall be possible to activate external outputs (e. g. lights and sirens).		
It shall be possible to use sound notifications for attracting attention to detected motion.		
It shall be possible to get quick overview of sequences with detected motion.		
It shall be possible to get quick overviews of alerts.		
It shall be possible to quickly search selected areas of video recording for motion.		
It shall be possible to skip gaps during playback of recordings.		
It shall be possible to configure and use several different joysticks.		
It shall be possible to print images, with optional comments.		
It shall be possible to copy images for subsequent pasting into word processors, email, etc.		
It shall be possible to export recording (for example, for use as evidence) in AVI, JPEG and database formats.		
It shall be possible to use pre-configured as well as customizable keyboard shortcuts to speed up common actions.		
It shall be possible to insert overlay buttons, for example, for activation of speakers, events, outputs, movement of cameras etc.		
It shall be possible to use a sequence function that lists thumbnail images representing recorded sequences from an individual camera or all cameras in a view.		
It shall be possible to use a forced playback mode allowing the user to playback recorded video from inside the 'live' mode while viewing 'live' video.		
The client viewer shall support the use of 3-axis USB joysticks for control of pan, tilt, zoom and auxiliary camera functions.		
The client viewer shall support the use of multimedia control devices, which are capable of emulating keystrokes, for the efficient review of recorded video.		
The client viewer shall support the use of keyboard shortcuts for control of standard features. It shall allow the user to program numerical keyboard shortcuts for camera views. The shortcut number shall be displayed with the view description in the live and playback displays. The shortcut shall allow the user to change		

	views with 2 to 3 keyboard entries.		
	The client viewer shall have the capability to receive multicast streams. The client viewer shall have the capability to detect if the network becomes unreliable and to automatically switch to unicast to ensure that the operator is able to receive video.		
	The operator shall have the ability to use digital zoom where the zooming is performed in the image only on any number of cameras simultaneously. This functionality shall be the default for fixed cameras. The use of digital zoom shall have no affect on recording, or other users.		
12	Map Functions		
	<i>Built-in map function in the client viewer shall provide an intuitive overview of the system and shall offer integrated access to all system components.</i>		
	<i>Map function shall be able to use standard graphical file formats including: jpg, gif, png, tif, etc.</i>		
	<i>It shall be possible to use any number of layered maps, and it shall be possible to easily drag-and-drop and point-and-click definition of cameras, servers, microphones, speakers, I/O devices, hot-zones, and PTZ camera presets.</i>		
	<i>Hot zones shall be allowed for intuitive navigation between different map levels.</i>		
	<i>Map function shall support instant camera preview when moving the mouse pointer over a specific camera.</i>		
	<i>Map function shall support central overview of the surveillance system via an alarm list containing alarm indicators of high, medium or low prioritized alarms. Furthermore the alarms shall be categorized by the following states: new, in progress, on hold, or closed. Alarms must be possible to acknowledge by right-clicking elements on maps.</i>		
13	Remote Client Viewer		
	<i>The web-based remote client viewer shall offer live view of up to 16 cameras, including PTZ control with joystick, fisheye (360 degrees) cameras and event/output activation. The playback function shall give the user concurrent playback of up to 16 recorded videos with date, alert sequence, or time searching.</i>		
	<i>The web-based remote client viewer shall offer quick overviews of sequences with detected motion.</i>		
	<i>The web-based remote client viewer shall be able to generate and export evidence in AVI (movie clip) and JPG (still image) formats.</i>		

	The system shall support the use of separate networks, VLANs, or switches for connecting the cameras to the recording servers providing physical network separation from the clients, and facilitate the use of static IP addresses for the devices.		
	The system shall support H.264, MPEG-4 (Part 2), MPEG-4 ASP, MxPEG, and MJPEG compression formats for all analog cameras connected to encoders, and all IP cameras connected to the system.		
	The system shall support dual-streaming cameras and shall cover the following compression formats: H.264, MPEG-4 (Part 2) and MJPEG.		
	The recording server shall utilize high performance ISCSI, SCSI, SAS and SSD disk drives for online recording storage and shall allow the use of lower cost SATA drives for the RAID arrays for online archive storage. Use of online archiving shall ensure that data always is readily available. Use of tape-backup systems shall not be acceptable.		
	The system shall allow the frame rate, bit rate and resolution of each camera to be configured independently for recording. The system shall allow the user to configure groups of cameras with the same frame rate, bit rate and resolution for efficient set-up of multiple cameras simultaneously.		
	The recording server(s) shall have the ability to support multiple Network Interface Cards (NIC) and shall support connection to the cameras on a network separate from the client viewer, management server and system manager.		
	The recording server shall have the ability to accept the full frame rate supplied by the cameras, while recording a lower frame rate yet still shall make the higher frame rate available to the clients for live viewing.		
14	Remote Mobile App		
	Shall be available on internet as an application for compatible smartphone and Tablets		
	Shall support Android as well as Apple IOS softwares, with respective smart phones		
	Full screen video supported, cameras shuffle from left to right or right to left supported		
	Digital pinch to zoom supported		
	Control of PTZ from mobile app		
	Use of the mobile device's camera as a camera in the VMS		

(e) SERVER SPECIFICATIONS

Server:	
Item	Description of Requirement
Chassis	2 U Rack Mountable
CPU	One or two numbers of latest generation Intel 8 Core E5-2630v3 processor
CPU L3 CACHE	20MB L3 cache
Memory	
Motherboard	Intel® C610 Series Chipset
Memory	128GB RAM scalable to at least upto 512GB, Should be capable of identifying and reporting whether genuine OEM memory is installed. Each DIMM should work at 2133MHz, 1.2V even after populating all the DIMMs in the channel.
Memory Protection	Advanced ECC with multi-bit error protection and memory online spare mode
HDD Bays	Up to 8LFF, HDD
Optical drive Bay	One optional optical drive bay to install DVD-ROM or DVD-RW.
Hard disk drive	6*4.0 TB SATA HDDS populated in RAID 5.
Controller	6Gb/s SATA RAID controller with RAID 0/1/10/5 supported or Better
Networking features	Server should have one of the following: 1. 10Gb 2-port Ethernet adaptor supporting enterprise class features such as VLAN tagging, adaptive interrupt coalescing, MSI-X, NIC teaming (bonding), Receive Side Scaling (RSS), jumbo frames, PXE boot and virtualization features such as VMware NetQueue and Microsoft VMQ.
Interfaces	Video - 1 4 USB ports (standard) Micro SD slot - 1
Bus Slots	Six PCI-Express 3.0 slots
Power Supply	Redundant Power Supplies
Fans	Redundant hot-plug system fans
Graphics	Integrated Matrox G200 video standard 1280 x 1024 (32 bpp) 1920 x 1200 (16 bpp)
Industry Standard Compliance	ACPI 2.0b Compliant PCIe 3.0 Compliant PXE Support WOL Support Microsoft® Logo certifications USB 3.0 Support ASHRAE A3/A4

Embedded system management	<p>Should support monitoring ongoing management, service alerting, reporting and remote management with embedded Gigabit out of band management port</p> <p>Server should support configuring and booting securely with industry standard Unified Extensible Firmware</p> <p>System should support RESTful API integration</p> <p>System management should support provisioning servers by discovering and deploying 1 to few servers with Intelligent Provisioning</p> <p>System should support embedded remote support to transmit hardware events directly to OEM or an authorized partner for automated phone home support</p>
Security	<p>Power-on password</p> <p>Serial Interface control</p> <p>Administrator's password</p> <p>TPM 1.2</p> <p>UEFI</p>
Operating Systems and Virtualization Software Support	<p>Microsoft Windows Server</p> <p>Red Hat Enterprise Linux (RHEL)</p> <p>SUSE Linux Enterprise Server (SLES)</p> <p>Oracle Solaris</p> <p>VMware</p>
Secure encryption	<p>System should support Encryption of the data on both the internal storage and cache module of the array controllers using encryption keys. Should support local key management for single server and remote key management for central management. for enterprise-wide data encryption deployment.</p>
Provisioning	<p>Essential tools, drivers, agents to setup, deploy and maintain the server should be embedded inside the server. There should be a built-in Update manager that can update firmware of system by connecting online.</p>

cd

AL

Koh

Koh

Remote Management	<ol style="list-style-type: none"> 1. System remote management should support browser based graphical remote console along with Virtual Power button, remote boot using USB/CD/DVD Drive. It should be capable of offering upgrade of software and patches from a remote client using Media/image/folder; It should support server power capping and historical reporting and should have support for multifactor authentication. 2. Server should have dedicated 1Gbps remote management port. Remote management port should have 4GB NAND flash with 1GB available for user access. NAND flash should be used for keeping system logs and downloading firmware from HP website or internal repository 3. Server should support agentless management using the out-of-band remote management port. 4. The server should support monitoring and recording changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur. 5. Applications to access the server remotely using popular handheld devices based on Android or Apple IOS should be available. 6. Remote console sharing upto 6 users simultaneously during pre-OS and OS runtime operation, Console replay - Console Replay captures and stores for replay the console video during a server's last major fault or boot sequence. Microsoft Terminal Services Integration, 128 bit SSL encryption and Secure Shell Version 2 support. Should provide support for AES and 3DES on browser. Should provide remote firmware update functionality. Should provide support for Java free graphical remote console. 7. Should support managing multiple servers as one via <ul style="list-style-type: none"> Group Power Control Group Power Capping Group Firmware Update Group Configuration Group Virtual Media Group License Activation
Server Management	<p>The Systems Management software should provide Role-based security</p> <p>Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD. Should support automatic event handling that allows configuring policies to notify failures via e-mail, pager, or SMS gateway or automatic execution of scripts.</p> <p>Should provide an online portal that can be accessible from anywhere. The portal should provide one stop, online access to the product, support information and provide information to track warranties, support contracts and status. The Portal should also provide a Personalized dashboard to monitor device health, hardware events, contract and warranty status. Should provide a visual status of individual devices and device groups. The Portal should be accessible on premise (at customer location - console based) or off premise (using Internet).</p> <p>Should support scheduled execution of OS commands, batch files, scripts, and command line apps on remote nodes</p>

	Should be able to perform comprehensive system data collection and enable users to quickly produce detailed inventory reports for managed devices. Should support the reports to be saved in HTML, CSV or XML format.
	Should help to proactively identify out-of-date BIOS, drivers, and Server Management agents and enable the remote update of system software/firmware components.
	The Server Management Software should be of the same brand as of the server supplier.
	Infra Platform /Infra Software to support a variety of different hypervisors, such as VMware, Microsoft Hyper-V, Red Hat KVM, and HP Integrity VM
	Solution available to Deploy a fast and easy Installation via software appliance delivery mode. With its own OS and Database to provide Infra and lifecycle management
	Management software should support integration with popular virtualization platform management software like vCenter, SCVMM and RedHat RHEV

(f) SWITCHES SPECIFICATIONS

S-No		Managed Aggregation switch with 12 SFP Ethernet ports Required Minimum Specification
1	Switch Architecture	The Switch should have atleast 12 x 1000 BaseX GE SFP Line Rate ports
2		The Switch should support 2 x 10G SFP+ or 4 x 1G SFP Uplink Modules/ uplink port in addition to above mentioned ports.
3		Transceivers to be supplied as per minimum BOQ given in RFP.
4		The Switch should have Internal Redundant Power Supplies.
5		The Switch should support Stacking module/ ports
6		The Switch should have atleast 2GB of Flash for storing OS and other Log and 2GB of DRAM/ SDRAM.
7		The Switch should have field replaceable/ redundant fans.
8	Switch Performance	The Switch should have power savings mechanism wherein it should reduce the power consumption on ports not being used.
9		The Switch should have atleast 64 G nonblocking switching bandwidth and 46 Mpps of forwarding rate.
10		The Switch should have atleast 96 Gbps of Stack Bandwidth per switch.
11		The Switch should support atleast 10000 MAC Addresses.
12		The Switch should support atleast 10000 IPv4 routes.
		The Switch should support atleast 4000 VLAN IDs & 1000 VLAN per switch

13	Stacking	The Switch architecture should support stacking of atleast 8 switches together.
14		The Switch stack should be based on Distributed forwarding Architecture, where in each stack member forwards its own information on network.
15		The Switch stack architecture should be Plug & Play for attaching or removing any switch from the stack without any downtime and should support automatic upgrade when master switch receives a new software version.
16		The Switch stacking module/ ports should have 96 Gbps of throughput.
17	Layer 3 Features	The Switch should support routing protocols such OSPF, BGPv4, IS-ISv4, OSPFv3, static, RIPv1 & RIPv2, IPv6 & IPv4 Policy Based Routing (PBR)
18		The Switch should support IP Multicast and PIM, PIM Sparse Mode, PIM Dense Mode, PIM Sparse-dense Mode & Source-Specific Multicast
19		The Switch should support Inter-VLAN routing.
20		The Switch should support VRRPv3 or equivalent.
21		The Switch should support uRPF for IPv4 and IPv6.
22	Layer 2 Features	The Switch should be able to discover (on both IPv4 & IPv6 Network) the neighboring device giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems.
23		The Switch should support Detection of Unidirectional Links (in case of fiber cut) and to disable them to avoid problems such as spanning-tree loops.
24		The Switch should support centralized VLAN Management, VLANs created on the core switch should be propagated automatically.
25	Network Security Features	The Switch should have Port security to secure the access to an access or trunk port based on MAC address to limit the number of learned MAC addresses to deny MAC address flooding.
26		The Switch should support Unicast Reverse Path Forwarding (RPF) feature to mitigate problems caused by the introduction of malformed or forged (spoofed) IP source addresses into a network by discarding IP packets that lack a verifiable IP source address.
27		The Switch should support RADIUS change of authorization and downloadable Access List for comprehensive policy management capabilities or equivalent functionality allowing change of authorization of users should be provisioned.
28		The Switch should support Secure Shell (SSH) Protocol, and Simple Network Management Protocol Version 3 (SNMPv3) to provide network security by encrypting administrator traffic during Telnet and SNMP sessions.
29		The Switch should support IPv6 RA Guard, DHCPv6 guard, IPv6 Snooping to prevent any Man-in-middle attack.

30		The Switch should support Dynamic VLAN, Downloadable ACLs, Multi-Auth VLAN Assignment, MAC Based Filtering & Web Authentication security mechanism.
31	Quality of Service (QoS) & Control	The Switch should support hierarchical wired QoS (HQoS) including hierarchical classification, policing and shaping or equivalnet.
32		The Switch should be capable of Downloading Downloadable Access List or equivalent mechanism from network security engine based on user identity.
33		The Switch should support Auto QoS/ equivalnet for certain device types and enable egress queue configurations.
34	Application Visibility	The Switch should support Full Flexible Neflow v9 / jFlow/ SFlow which provides ability to characterize IP traffic and identify its source, traffic destination, timing, and application information and is critical for network availability, performance, and troubleshooting.
35		Bidder need to define the supported number of flows in switch, higher number of flows would be preferred.
36		The Switch should be capable of monitoring network traffic on Physical ports or VLAN.
37		The Switch should support Wireshark packet analyzer or equivalent that supports multiple protocols and analyzes traffic.
38		The Switch should support hop-by-hop analysis of application level statistics for troubleshooting video applications.
39	Standards & Compliance	Switch should support IEEE 802.1s, 802.1w, 802.1x, 802.3ad, 802.1D Spanning Tree Protocol, 802.1p CoS Prioritization, 802.1Q VLAN, IEEE 802.1AE MACsec
40		IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports
41		RMON I and II standards
42		SNMPv1, SNMPv2c, and SNMPv3
43	Safety & Compliance	47CFR/ FCC Part 15 (CFR 47) Class A
44		EN 55022 Class A
45		CISPR 22 Class A/ CISPR24
46		VCCI Class A
47		EN 55024
48		UL 60950-1, CAN/CSA-C22.2 No. 60950-1, EN 60950-1, IEC 60950-1
49		IPv6 Ready Logo certified or equivalnet
50		The switch should be minimum EAL2 / Applicable Protection Profile certified under the Common Criteria Evaluation Program

Industrial Grade Switch - 08 Port

1	Switch Architecture and Performance	The switch should provide 8 port 10/100 Mbps FE ports downlink out of which minimum four should be Poe/POE+ and switch should additionally have 4 GE SFP uplinks. Should be proposed with ruggedized transceivers as per SI solution/ BOQ.
2		Switch should have wire rate switching fabric of minimum 9.6 Gbps or more.
3		802.1Q VLAN on all ports with support for minimum 255 active VLANs and minimum 1K Mac addresses
4	Layer 2 Features	Spanning Tree Protocol as per IEEE 802.1d, 802.1s and 802.1w
5		Should support Improved resiliency with the support of Resilient Ethernet Protocol (REP) or equivalent for ring topology.
6		Link Aggregation Control Protocol (LACP) as per IEEE 802.3ad.
7		Switch should support IGMP v1/v2/v3 as well as IGMP snooping and minimum 255 IGMP Multicast Groups
8	Quality of Service (QoS) Features	Switch should support classification and scheduling as per IEEE 802.1P on all ports and four egress queues per port. Switch should also support mechanism of applying Automatic QoS or equivalent
9		Switch should support strict priority queuing or equivalent to guarantee that the highest-priority packets are serviced ahead of all other traffic.
10	Security Features	Switch should support ACLs, TACACS+, RADIUS, IP Route Filtering, ARP spoofing, DHCP snooping, DHCP Option 82, Dynamic ARP Inspection (DAI), IP source guard and BDU Guard or equivalent, IEEE 802.1AE MACsec
11	Management, Easy-to-Use Deployment and Control Features	Switch should have a console port, support for SNMP Version 1, 2 and 3, TELNET, SSHv2, 4 groups of embedded RMON, Layer 2 Traceroute or equivalent. DHCP Server functionality can be provided via Layer 3 or Layer 2 Switch.
12		The switch should support following IPv6 Features: 128-Bit Wide Unicast Addresses, DNS for IPv6, ICMPv6, Neighbor Discovery, SNMP and Syslog Over IPv6, HTTP over IPv6 and IPv6 MLD snooping
13	Standards	RoHS Compliant, IEEE 1588v2 hardware ready - Precision Time Protocol, IEEE 802.3af, 802.3at, NTP
14	Industry Standards:	• NEMA, ODVA Industrial EtherNet/IP, PROFINETv2, ABB IT Certificate, IP30
15	Safety & Hazard	• CSA C22.2 No.142, UL/CSA 60950-1, EN60950-1, CB to IEC 60950-1
16		DIN rail mount
17	EMC Compliance	• FCC, IEC/EN 61000-(4-2 to 4-6, 4-8, 4-9, 4-11, 4-29), RoHS

18	Operating Temperature	• -40C to +70C with Enclosure
19	Shock and	• IEC 60068-2-27 (Operational Shock, Non-Operational Shock)
20	Vibration	• IEC 60068-2-6, IEC 60068-2-64, EN61373 (Operational Vibration, Non-operational Vibration)
21	Relative Humidity	• Relative Humidity of 5% or 95% Non-condensing, IEC 60068 -2-3, IEC 60068-2-30, IEC 60068-52-2

(g) 24U Rack

S. No	Description	Specification	Compliance
1	Dimensions (H x W x D)	48 x 24 x 24	
2	Color	VTs	
3	Frame System	Steel frame	
4	Maximum load bearing capacity	upto 1400 kg	
5	Capacity	19" mounting capacity	
6	Power Strips	15, 20, 30 Amp; Vertical or Rack mount	
7	Vertical Mounting Rails	Should be available	
8	Cable Management Hardware	Should be available	

(h) OUTDOOR RACK

Technical Specifications:

Frame: Enclosures in sturdy sheet steel construction consisting of a 1.5mm sheet steel frame folded from one piece and welded , with All-round protective channel on the door aperture, rear side open panel with holes for wall mounting brackets. With 1 pair of 19" Mounting angles mounted in the front, which can be recess able for Extra cable management. Cutout with Gland plates on Bottom sides of the Enclosure for cable entry purpose
Doors: 1.5mm sheet steel door with foamed-in seal, screw fixed hinges Which can be changed for left-hand or right-hand door hanging (for Single door enclosures), 130° opening angle which can be retrofitted For 180° in accordance with VDI, cam lock with double-bit insert.
Rear Panel: Rear Panel of 1.5mm sheet thickness Internal Bolttable at the rear side.
Enclosure Material: CRCA Sheet steel
Surface finish:
- Enclosure: Powder-coated

- Mounting angles: Zinc-plated
Colour: RAL 7035
Supply includes:
- Enclosure with hinged door
- Interchangeable door hinge
- Cam lock and double-bit insert
- Gland plate for cable entry in the enclosure base.
- Cantilever shelf 19' mount with 250mm deep..
- Fan filter for air circulation with IP 55 category will be mount on side walls.
Rain Canopy: Rain Canopy of 50mm Height to be fixed on the Top cover.
Dimension :- 600W x (498) 9UH x 500D
IP Protection: IP 55.
Paint - Electrophoretic Powder quoting:
Outdoor enclosure required EC Dip coat powder quoting. It uses Triple surface treatment i.e. Phosphating, electrophoretic dipcoat – priming and textured powder coating - offers optimum protection against corrosion. The coating is resistant to Minerals Oils, Lubricants, machining emulsions, solvents, weak acids and alkalines.

(I) Client Workstation

Sr No	Description	Specifications	Compliance	Reference Document for Cross verification
1	Processor	Intel core i7 processor		
2	Speed	3.2 Ghz		
3	FSB	1.333 Mhz		
4	Level 2 Cache	6 MB		
5	Memory	16 GB DDR3 SDRAM		
6	Hard Drive	500GB SATA 3.0Gb/s		
7	Optical Drive	Single drive : DVD +/-RW+CD-ROM		
8	Graphics	2 GB Graphic Card NVIDIA or ATI Radeon		
9	Display	42"LD screen		

10	Keyboard	Wireless keyboard		
11	Mouse	Wireless optical mouse		
12	Cabinet	Tower		
13	Power Supply	230VAC/50Hz		
14	NIC	2x10/100/1000		
15	Expansion Slots	4xPCIe/PCIx		
16	OS	Microsoft Windows 7 Professional, Microsoft office 2010		
17	Ports	Minimum 4 Nos USB ports		
18	S/W utilities	Anti-virus with 1 yr subscription		
19	Accessories	PC furniture and operator furniture & 1KVA UPS		
20	Make	VTs		
21	Model	VTs		

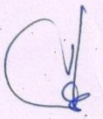
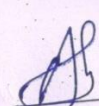
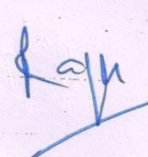

(j) LED Display

S. No	Description	Specification	Compliance
1	Size	Minimum 46" LED	
2	Display Resolution	Full HD1920 x 1080 pixels	
3	Backlight Module	LED backlight panel	
4	Video Signal	480/60i, 480/60p, 1080/60i, 1080/50p (HDMI)	
5	Aspect ratio	16:9	
6	Brightness	300 cd/m2	
7	View Angle- (horizontal/vertical)	179/179 degree	

COPPER COMPONENTS

Power Cable – 3 Core 2.5 sq mm

S. No	Description	Specification	Compliance
1	Model	3 Core 2.5 Sq.mm Armoured	
2	Voltage Grade	1100 Volts	
3	Type of Conductor	Copper	
4	No of cores	3	
5	No. of strands/core	7(multi)	

6	Colour code	Red/Yellow/Blue	
7	Core insulation	XLPE 0.7mm thick	
8	Inner sheath	Extruded PVC type ST2	
9	Armoured Material	Galvanised steel wire	
10	Outer sheath	FRLS PVC type ST2	

OFC – 6 Cores

Sr.No	Description	Specification	Compliance
1	Type	Single mode	
2	Specification	IEC 60793-2-50, ITU G.652	
3	Construction	Multi-fiber loose tube jelly filled	
4	Number of fibers	6	
5	Number of loose tubes	1	
6	Laying	Direct burial in trenches	
7	Strain relief	VTs	
8	Overall sheath	Polyethylene	
9	Aarmor	Steel armored	
10	Attenuation at 1310 nm	0.38 db/ km	
11	Attenuation at 1550 nm	0.25 db/ km	
12	Fibre cut-off wave	>1150, ≤1320 nm	
13	Polarization mode	≤0.5 ps/ vkm	
14	Microbending loss at	≤0.05	
15	Proof stress level	≥ 7.7 Gpa	

Pole

Sr No	Description	Specification	Compliance
1	Design	As per IS 875 for wind load calculation and IS 800 for design practices.	
2	Height	10mtrs or as per requirement	
3	Wind Load	based on area of pole structure for 180kmph	
4	minimum thickness	fabricated steel part or structural pipes shall be 3.2 mm.	
5	Test certificates For all Parts	Must be made available	
6	ferrous metal	hot dip zinc galvanized according to the applicable Standards after fabrication	
7	Anchor and foundation designs	based upon the soil characteristics and parameters listed in the site geotechnical report or	

		sufficient information supplied by the Customer	
8	climbing ladder	Available	
9	Certification of design Calculation	certified by structural consultant of a government engineering college IIT/NIT	

LIU - 12/24 Port

Sr No	Description	Specification	Compliance
1	Make	VTS	
2	Model	VTS	
3	Form Factor	Panel/Rack Mount	
4	Number of ports	12 or 24	
5	Splice trays	Complete Aluminum body Provision for 12/24 fibre splices. Cushioned splice holder. Flame retardant plastic. Two halves spool design.	
6	Cable spools	Flame retardant plastic. Two halves spool design	
7	Enclosure	Aluminium/ powder coated housing	

CAT 6 - UTP

Sr.No	Description	Specification	Compliance
1	CAT-6 UTP Cable	4 Pair Cable, 23 AWG Copper with integral cross-member pair separator for uniform characteristic impedance. Standardization ISO/IEC 11801 2nd Ed.; IEC 61156-5 2nd Ed.; EN 50173-1; EN 50288-6-1; EIA/TIA 568B.2.1 Cable overall diameter: ϕ 6.3 mm. Should have tensile strength of 100N. The cable should have 100ohm impedance and data transmission frequencies up to 250MHz. It should be certified by independent test labs like 3P/Delta to meet Cat-6 Standards. The cable should be supplied in 500m reel.	

UPS - 3 KVA

Sr No	Description	Specification	Compliance
1	Topology	Double Conversion Online	
2	Nominal Output Voltage	230 V (Configurable for 220 : 230 or 240 nominal output voltage)	
3	Efficiency at Full Load	94%	
4	Output Power Capacity	2100 Watts / 3000 VA	
6	Nominal Input Voltage	230V	
7	Input Frequency	50/60 Hz +/- 5 Hz (auto sensing)	
9	Bypass	Built in Static Bypass	
10	Battery Type	No internal battery - uses external battery system SMF type for 30 min backup on full load.	

Location of Camera

क्र.सं.	स्थान जहाँ कैमरे को प्रतिष्ठापित किये जाने हेतु स्थान चिह्नित किये गये हैं।	कैमरे का नाम	कैमरे की संख्या
1	चकिय गेट के पास खम्भा नं० 0w1/23 पर	PTZ CAMERA	01
2	पोर्टिको प्रवेश द्वार की रेलिंग के ऊपरी दीवार पर प्लेटफार्म साइड	PTZ CAMERA	01
3	बुकिंग हाल प्रथम के दोनों तरफ के डायरेक्शन में	BULLET CAMERA	03
4	प्लेटफार्म नं० 1 पर स्थित मेडिकल स्टोर के सामने पूर्व की तरफ	BULLET CAMERA	01
5	बुकिंग हाल द्वितीय मेडिकल स्टोर के ऊपर टिकट विन्डो फोर्सिंग	BULLET CAMERA	01
6	बुकिंग हाल द्वितीय में कमसम फास्ट फूड के ऊपर दाहिनी तरफ	BULLET CAMERA	01
7	बुकिंग हाल द्वितीय इन्चवायरी डिस्प्ले बोर्ड के पास	BULLET CAMERA	01
8	बुकिंग हाल द्वितीय प्रवेश द्वार के पास	BULLET CAMERA	01
9	प्लेटफार्म नं० 3-2 ट्रेन लाइटिंग आफिस पर कानपुर साइड	BULLET CAMERA	01
10	प्लेटफार्म नं० 6-4 ट्रेन लाइटिंग कार्यालय की छत पर	FIX BOX TYPE CAMERA	01
11	प्लेटफार्म नं० 6 ट्रेन लाइटिंग कार्यालय की छत पर	FIX BOX TYPE CAMERA	01
12	प्लेटफार्म नं० 9-8 खम्भा नं० 1080 पर	FIX BOX TYPE CAMERA	01
13	फुट ओवर ब्रिज प्रथम	BULLET CAMERA	02
14	फुट ओवर ब्रिज द्वितीय	FIX BOX TYPE CAMERA	01
15	ओवर ब्रिज द्वितीय ए	FIX BOX TYPE CAMERA	01

16	सरकुलेटिंग एरिया में स्थित आई0आर0सी0टी0सी0 आफिस के सामने पोल पर	PTZ CAMERA	01
17	सरकुलेटिंग एरिया प्रोपेड बूथ के सामने डिवाइडर पोल लगाकर	PTZ CAMERA	01
18	सरकुलेटिंग एरिया एन0आर0 कोर्ट के सामने आर0एम0एस0 पोर्टिको के पूर्वी कोने पर	PTZ CAMERA	01
19	सरकुलेटिंग एरिया में आर0एम0एस0 पोर्टिको में पूर्वी कोने पर इनर साइड	BULLET CAMERA	01

BOQ (BILL OF QUANTITY)

Sl no.	Items	Qty	Make & model
1	SITC OF 1080 HD OUTDOOR IP PTZ CAMERA	05	
2	SITC OF 1080P HD IP IR BULLET CAMERA	11	
3	SITC OF 1080P HD IP FIX BOX CAMERA	06	
4	SITC OF VIDEO MANAGMENT SOFTWARE LICENCE	01	
5	SITC OF MANAGMENT SUMRECORDING SERVER WITH 24 TV HARD DISK	01	
6	SITC OF CLIENT WORK STATION	02	
7	SITC OF MANAGED AGGREGATION SWITCH WITH 12 SFP ETHERNET PORTS	01	
8	SITC OF INDUSTRIAL GRADE SWITCH-08 PORT	03	
9	SITC OF GIGA ETHERNET COPPER TRANCEIVER	04	
10	SITC OF GIGA ETHERNET FIBER TRANCEIVER	04	
11	SITC OF GIGA ETHERNET FIBER TRANCEIVER FOR INDUSTRIAL GRADE SWITCH	03	
12	SITC OF LED MONITOR 46 " DISPLAY	03	
13	SITC OF UPS 3 KVA ONLINE WITH 1HR BACKUP	01	

14	SITC OF UPS 1KVA OFFLINE WITH 30 MIN. BACKUP	03	
15	SITC OF 24 URACK	01	
16	SITC OF OUTDOOR RACK	04	
17	SUPPLY OF POWER CABLE- 3CORE	2000MTR.	
18	SUPPLY OF C-06CORE	3000MTR.	
19	SITC OF POLES- 10MTR.	04	
20	SUPPLY OF CAT-6 UTP	3000MTR.	



NOTE-

- 1- Apart from aforesaid mentioned BOQ the bidders are free to add the additional equipment/device in order to meet out the functionality of project.
- 2- Bidder shall make necessary arrangement for safety of networking component from monkeys and rats etc.

[Signature]
22/07/16
400(SIS)

[Signature]

[Signature]

[Signature]